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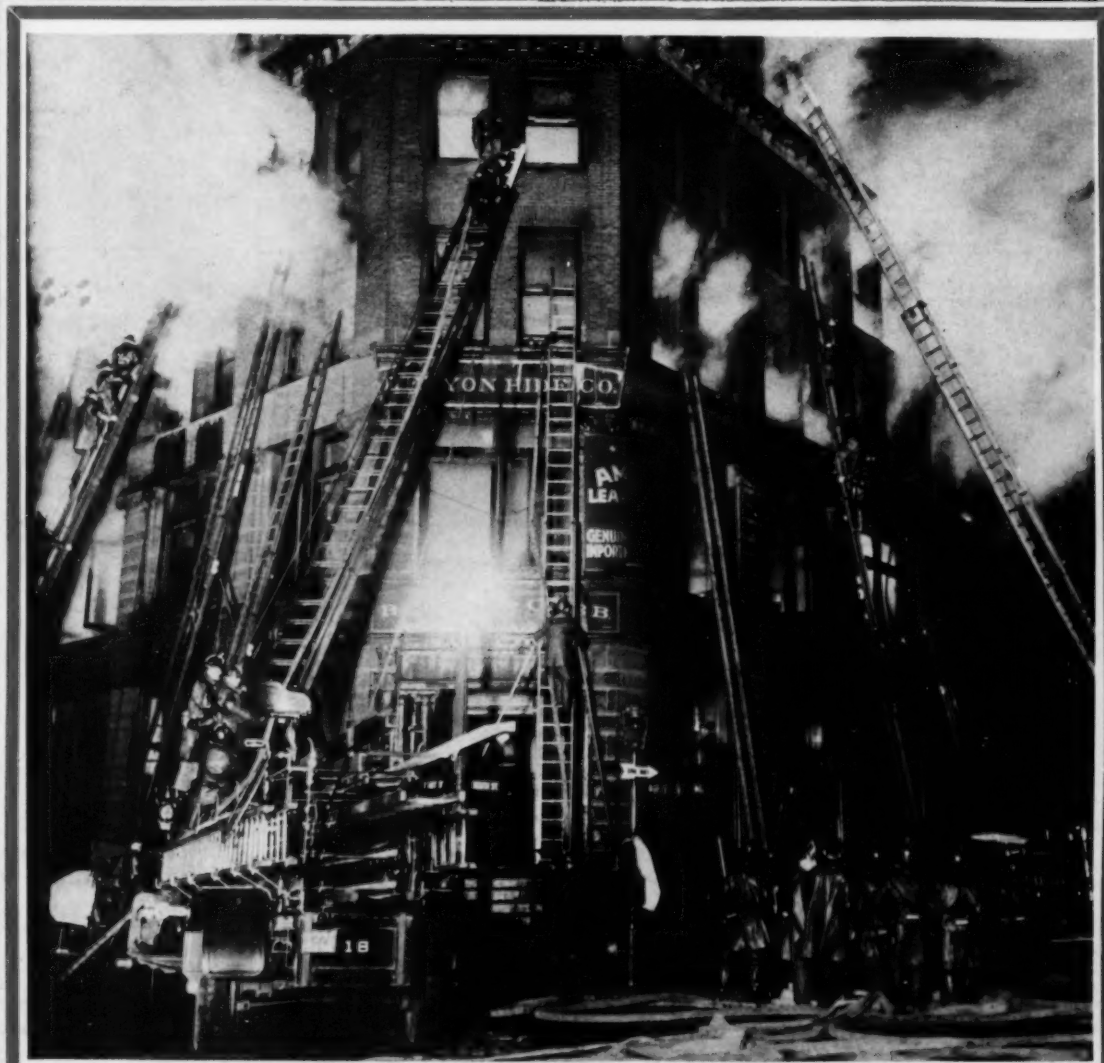
A consolidation of FIRE AND WATER ENGINEERING and THE FIRE ENGINEER

The Journal of the Fire Protection Profession

APRIL 15, 1931



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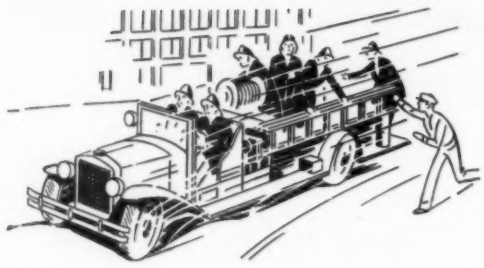

At the first sound of the bell, this Ahrens-Fox Model "V" is "rarin' to go." It is never "off the track."

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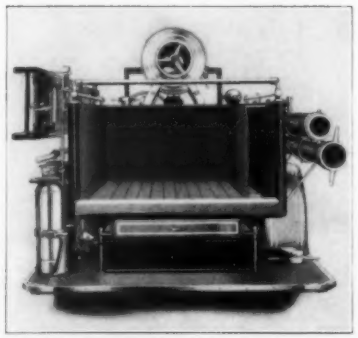
The body is a welded unit, eliminating any projecting bolts or rivets. Compartment on right carries 1½" hose. Pumping unit is out of the way, yet very handy. Apparatus is equipped with booster system, making it even more effective.



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A Consolidation of FIRE AND WATER ENGINEERING *and* THE FIRE ENGINEER

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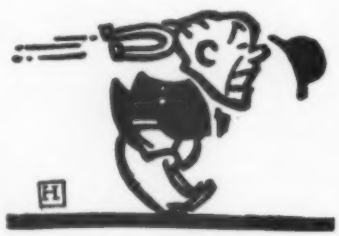

Is It a Matter of Luck?

AT one time in his life, the famous humorist Mark Twain published a country newspaper out in Missouri. One of the subscribers found a spider in the folds of his paper and wrote the editor asking whether it meant good or bad luck, to which Twain replied:

"Dear Subscriber: Finding a spider in your paper was neither good luck nor bad luck for you. The spider was merely looking over our paper to see which merchant was not advertising, so he could go to that store, spin his web across the door and lead a life of undisturbed peace ever afterward."

WE quite agree with Mark. Cobwebs have a meaning far more real and significant than mere superstition. They are markers on the road to decay — labels of the business that tries to slumber along without advertising.

The Publishers

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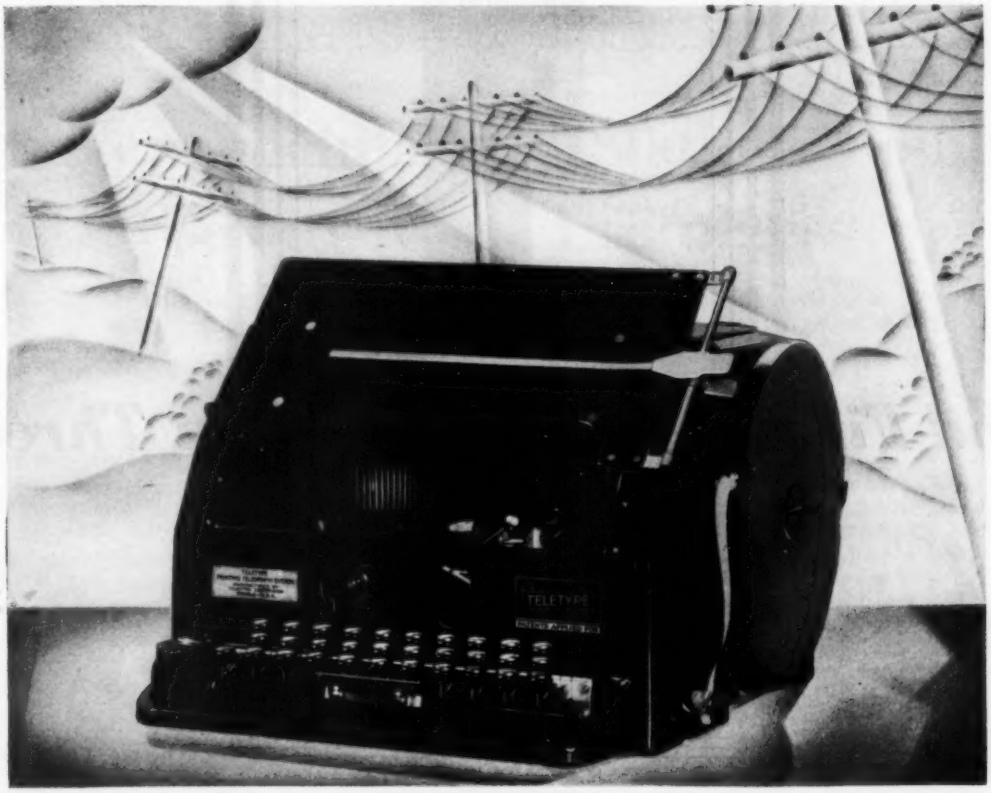
A REVOLUTIONARY NEW FIRE ALARM SYSTEM



Gives stations the exact location of the blaze instead of the nearest box number!

Now that most fires are reported to headquarters by telephone, old-fashioned fire alarm systems which send only box numbers to the various stations are proving woefully inadequate. For even though the headquarters operator knows the actual location of a fire, he can do no more than give the stations concerned the number of the nearest box... which may be blocks from the blaze.

The precious moments now lost by firemen in running down fires can be saved by installing Teletype... an amazing machine that sends typewriting over telephone or fire alarm system wires. By means of it headquarters can flash the *exact* address of a fire to any one station, to any group of stations, or simultaneously to all stations.

Teletype has a capacity of 370 letters or figures per minute. It is operated just like a typewriter, and prints its messages in a continuous line on a narrow paper tape. For further information consult your local telephone company or write direct to the Teletype Corporation, 1400 Wrightwood Ave., Chicago, U. S. A.

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(A Consolidation of Fire and Water Engineering and The Fire Engineer)

The Journal of the Fire Protection Profession

VOLUME LXXXIV APRIL 15, 1931 NUMBER 8

Two New Wichita Fire Stations Combine Beauty With Usefulness

Architectural Excellence and Efficiency Signalize the Latest Additions to the City's Fire Houses—High Value Area Well Protected

By RALPH H. SNYDER, Wichita, Kan.

TWO new fire houses were recently completed in Wichita, Kansas, that are the last word in efficiency and comfort in addition to their architectural beauty.

The stations were completed at an expenditure of $130,000 each, and are of modern reinforced concrete construction, being built almost identical, except to the exterior finish. Station No. 1, is finished in white stone trimmed with terra cotta, and Station No. 2, is finished in brown brick trimmed with natural stone. The interior finish of both stations is of white stucco except in the apparatus room which is finished in brown tile.

Chief H. H. McCall, Wichita, Kan.

The laying out of the rooms has been done with such care and foresight it has doubled the efficiency of the stations. Many new ideas have been worked out that also help to increase the efficiency, such as having the ceiling lights in the apparatus room between the rows of machines instead of directly over them; floor drains under each machine; wash slab in the rear; hose drying chute equipped with hot air fans; special locker room for the off-shift mens' coats and helmets; ceiling ventilators in the bunk room; hot air dryer in the bath.

Layout of the Stations

Each station has a complete kitchen for the men who desire to cook their own meals, or desire hot coffee after coming in after a fire. Recreation and reading rooms leave nothing to be desired for the comfort or pleasure of the men.

The layout of the rooms is as follows: The ground floor consists of a large apparatus room housing a maximum of eight machines, operators' room, house watchman's room, chief's office, general office, lavatory, locker room, boiler room, storage room and hose drying shaft. The second floor is laid out in Chief's and Assistant Chief's private bed rooms, Assistant Chief's office, general bedroom having a 40-bed capacity, class room, recreation room, reading room, locker hall, bath and wash rooms and kitchen.

Fire Department Organized in 1886

The Wichita Fire Department was organized in 1886, with A. G. Walden as Chief. The city, which now has a population of 111,000, was the second city in the country to have all motorized equipment. At the present time it has eight stations with a pay roll of 133 men and 18 pieces of apparatus which are distributed as follows:

Station No. 1, has one 1,000-gallon Ahrens-Fox pumper (new), one 750-gallon Seagrave pumper, one

Station No. 1 of the Wichita Fire Department

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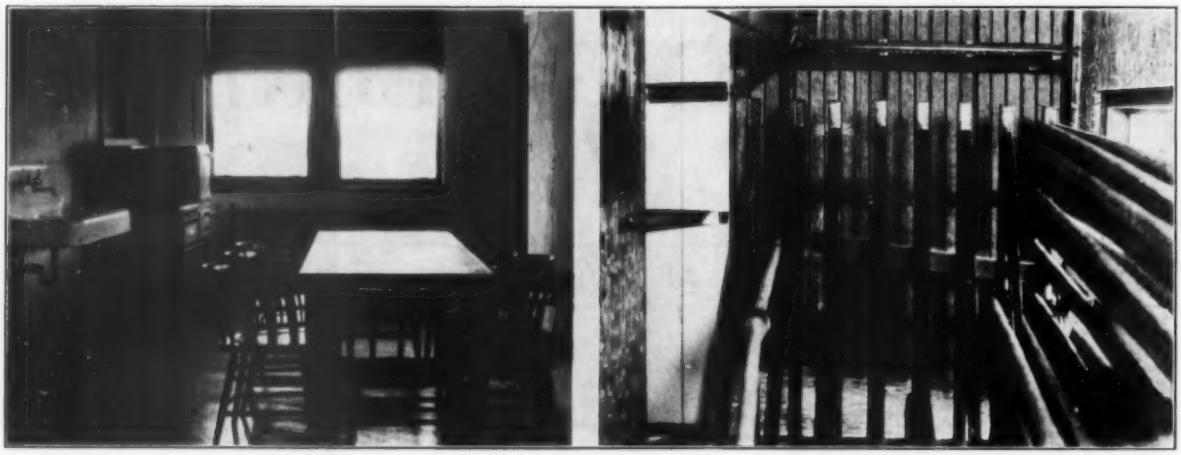


Left—The Excellently Arranged Kitchen, as Installed in Stations Nos. 1 and 2, Wichita. Right—Looking Straight Up the Hose-Drying Shaft of Stations 1 and 2

Ahrens-Fox Service Truck (new), one 750-gallon Webb pumper, one hose truck carrying 1,500 feet, and one 85-foot aerial truck.

Station No. 2, has two 1,000-gallon Ahrens-Fox pumpers (new), 1 squad truck carrying 120 gallons of water, and one Seagrave service truck.

All of the rest of the six stations have one pumper each, except Station No. 8, which has an Ahrens-Fox service truck and pumper.

With this distribution it is very easy to have two pumpers, carrying 1,200 feet of hose each, a service truck and a squad car to answer each first alarm in the residential district. On alarms in the central business area the entire equipment of both new stations answers. This varies downward, however, as the business section thins out. Each machine has its own district and there is no sudden confusion as to which will or will not answer. There are three District Chiefs in addition to the Chief and Assistant Chief, thus enabling the department to have a chief in charge on every alarm.

Unsatisfactory Former Arrangement

Previous to the completion of these two stations the main part of the City's apparatus was located in one building in the heart of the business district. This proved very unsatisfactory, as it necessitated the running of heavy traffic on every alarm, and also the complete standstill of all the downtown traffic, pedestrian as well as automobile. This was managed by switching the traffic signal lights on amber. Both of these difficulties have been removed however, with the new stations.

Now, Only Part of Traffic Is Halted

Now, only on downtown alarms does it necessitate the running of the heavy traffic, and the district containing traffic lights has been divided into three sections for the halting of the traffic, so all of the downtown area is not at a complete standstill at once. This also provides through traffic lanes that enables the department to cut through the district at a high speed that otherwise would not be possible.

Business Area Well Protected

This removal from the business district has not left the area unprotected as the stations are not so far removed that all sections can not be easily reached in a matter of a minute and a half from both stations. Also due to the fact that both stations are located in opposite directions, the men are brought to the downtown fire from two different angles, enabling them to catch more plugs in a minimum length of time than otherwise possible. Other sections of the city are also more easily reached, as each station is situated near two fast through streets.

Up-to-Date Fire Alarm System

The Gamewell Fire Alarm System was installed in 1922, and the city has a large number of alarm boxes. Every street intersection of the city is numbered as if it contained a box. On all alarms otherwise than box, the operator refers to his file, locates the number of the nearest intersection and transmits it over the system. However, the alarm is given out to the stations first by phone via the all station plug on the PBX Board. This gives a double check on the alarms so that in case the address of the fire is not clearly heard or the telephone is out of order a check can be accurately had a second later.

Transmitting the Alarm

When a telephone alarm is received the operator takes it off the PBX Board phone, writing the address as he receives it. He then turns a trip that sends out four taps over the system and brings all stations including police, gas, water and electric company to the fire phone. This trip also automatically turns on sirens and red lights that are situated on the exterior of each building to clear away any traffic that may be passing. He then gives out the address of the fire to all the stations at once.

If the alarm necessitates the apparatus to run through the downtown lights, he throws the switch that turns on the amber lights in that area. All of the traffic is cleared and at a standstill by the time the machines reach the zone. He then locates the number of the closest intersection to the fire and transmits it over the system. Last, he sets his apparatus board showing the type of the alarm, the apparatus that is out and the machines that cover in. It takes between 15 to 20 seconds from the time the alarm is received until the apparatus is moving, and it is but a matter of 8 seconds later until the system is transmitting.

Low Loss, with Fire Prevention Stressed

Underwriters who have visited the local department have all, without exception said that the department is one of the most efficient they have seen in a city of this

(Continued on page 291)

How California Reduces Fire Hazards Along Its Highways

Methods and Apparatus Used in the Burning of Dry Grass and Weeds to Avoid Grain and Forest Fires—Special Oil Spray Used

By T. H. DENNIS, Maintenance Engineer, California Division of Highways

The fire hazards arising from dry vegetable growth at the side of highways, ignited by the carelessness of passing motorists, is coming to be recognized. The following paper tells of the precautions taken in the state of California to minimize this trouble:

THE 1931 program of the California Division of Highways for spraying and burning roadside vegetation will extend into 46 counties of the state. It will cover 1,150 miles and represents an expenditure of $80,000.

Cutting and burning of roadside vegetation has been carried on for a number of years by the Maintenance organization. Prior to 1928 this work was on a somewhat limited scale and was for the purpose, mainly, of improving the appearance of our roadsides and only incidentally as a fire precaution. The serious fire losses of 1927 brought the matter forcibly to attention, and during the 1928 season the work was extended to include some major clearing of right of way as a fire precaution measure. The work that season covered 660 miles of roadsides.

Heavy Loss from Grain and Forest Fires

The serious situation and economic loss from grain and forest fires was brought to the attention of the public by the Governor's Fire Committee, appointed to discuss and coordinate the work of various agencies. The cooperation of the Division of Highways organization was sought along with other state agencies. The Maintenance Department, being in charge of this phase of the highway work, immediately began a study of the situation in order to be in position to initiate protective measures early in 1929. The study divided into two parts, first a field survey to determine the location and extent of especially hazardous areas, and second a study of methods of control and types of equipment which had been used.

It was estimated that the cost of weed and grass removal on some three thousand miles of the highways together with clearing from 700 miles of the worst sections of forest areas would be $250,000 annually. As the needs of traffic did not permit of diversion of such a sum from upkeep work, a careful survey was made of all areas, and sections were selected for treatment opposite grain fields, pasture, heavy brush lands, and similar situations where a critical hazard existed. Where the highway passed through built up areas, orchard country, or was adjacent to railroad rights of way or where some natural firebreak already existed it was felt that special treatment was not justified.

Investigations Into Economical Type of Treatment

The selection of an economical type of treatment required considerable investigation. Trial plots were sprayed with sulphuric acid and calcium chlorate preparations. Oil solutions of various kinds were also tried out using various rates of application. It was finally decided that Diesel Oil of 27 gravity applied at a rate of from 1/10 to 1/6 gallon per square yard of surface was the most satisfactory ecnomical material for the purpose.

The development of proper equipment to spray considerable areas at reasonable speed was also a matter requiring experiment. It was necessary that the spray be applied to the area adjacent the fence lines and that it be sufficiently flexible to use on cut and fill sections of the foothill roads as well as the level going of valley turnpike sections. During the first year the spraying outfit consisted of a 3½-ton truck carrying a 1,000 gallon tank. At the rear a platform supported a No. 2 Traherm spiral gear centrifugal pump, driven by a 1½-horsepower gas engine. The oil was pumped through a ¾-inch hose to a six foot section of ¾-inch steel tubing which carried five orchard type spray jets. This spray bar was borne by a man on foot and, while it served the purpose, the work was slow and exceedingly laborious.

For the 1930 season we profited by experience and the Equipment Department worked out a trailer outfit which is readily attached to any tank truck. This trailer, in addition to the pump and engine, provides space for a turntable and a platform for the operator. The turntable arrangement supports a telescopic outrigger arm which in turn carries the hose and spray bar. The outrigger may be extended or drawn in and may also be raised or rotated at the will of the operator. The spray bar may also be raised or lowered as desired. Altogether this outfit permits of speed and ease of operation. The trailer and hose connections are so designed that transfer from an empty truck to a full one is only a matter of minutes and there is a minimum delay of spreading operations. The same type outrigger was installed

Upper—Men Spraying the Roadside with Calcium Chlorate by Hand. Lower—Weed Spraying Outrigger on Oil Spreader Trailer

also on two of the asphalt spreader trailer units which gave excellent service. In addition to our own outfits several private parties constructed spray units and did some of the work under contract.

We are using the same outfits on our work this season with the addition of one unit which uses air atomization. It is claimed that the quantity of oil necessary can be materially reduced due to securing better penetration by this method.

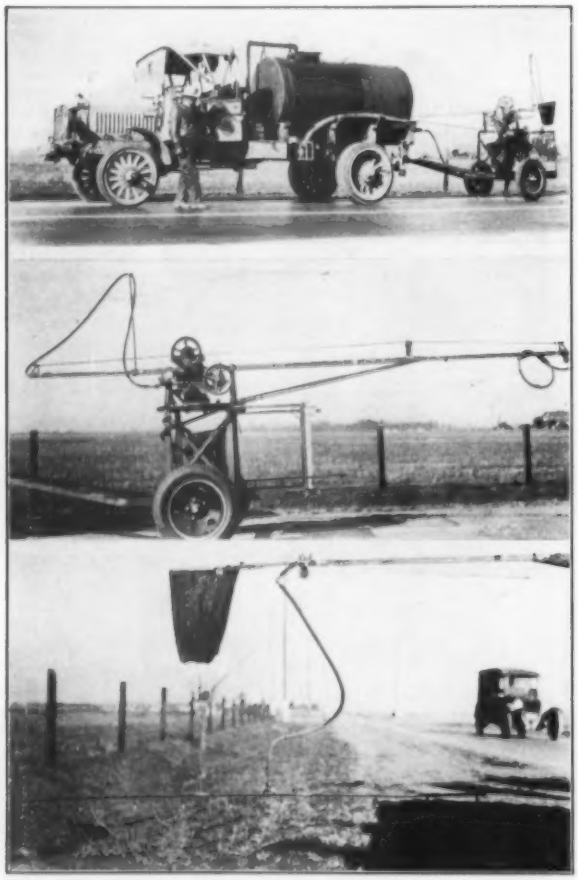
Fire Hazards of Old Method of Burning

The disadvantage of the old method of burning roadside vegetation was due to the necessity of waiting until the growth had dried. Any burning which was done thus created a hazard as adjoining areas were equally inflammable. As

property owners were not always willing to accept responsibility for burning which highway forces might undertake in front of their places, only a minimum amount of this work was done. The law makes an employee of the State responsible for his own acts and in the case of a fire getting beyond control with resulting claims for damage, it is necessary for the employee to show that he was not negligent in any way. As a result the employees were not anxious to do burning work and neither were the directing heads in good position to order it done. The early spraying of vegetation relieves this situation as the sprayed area may be burned if necessary while there is no hazard and an effective fire break is thus created.

Nine-Foot Strip Burned at Fence Line

During the first season a strip five feet wide along each fence line was sprayed and burned. This was found to be scarcely sufficient, and in 1930 the sprayed area was increased to a nine foot width. It developed, likewise, that when the vegetation was sprayed soon after it had started to grow that practically 100% kill was secured. A smaller quantity of oil was necessary to secure this result and there was the further saving in cost of burning as it was found impossible to burn over areas of the short dead vegetation. In some cases it was found necessary to retreat certain sections where heavy growths occurred with plenty of moisture. At other places a fairly heavy growth of summer weeds came up later, but this was not a serious disadvantage from a fire hazard point of view, as the weeds stayed green, fortunately, until after grain was cut and being rather coarse did not ignite so readily as the spring vegetation.



Upper—Diesel Oil Spray Trailer Attached to Tank Truck. Center—Side View of Diesel Oil Spray Outfit. Lower—Ten Foot Spray Bar on Diesel Oil Spray Unit. Simplex Orchard Sprays Used

The greater part of our spraying has been done with Diesel Oil although a considerable mileage was sprayed with calcium chlorate solution. This latter material was not of sufficient strength to give results comparable to the oil for the same cost of material. We are conducting further experiments with the calcium chlorate but do not plan on any extensive application this season.

In 1930 the program covered over 1,100 miles of roadsides at a cost of $72,000 or about $65 per mile which included the burning. This cost is somewhat lower than would be the case if burning work had been necessary over the entire area sprayed. Approximately 1,000 gallons of Diesel Oil was applied per mile at a cost of from 5 to 6 cents per gallon.

This year the work will cover 1,150 miles and the estimated cost is $81,000. The areas to be treated are as follows: along the Redwood highway in Marin, Sonoma, Mendocino, and Humboldt Counties; the Pacific Highway east and west of the Sacramento River to Redding as well as scattered sections totaling perhaps 25 miles between Redding and the State Line; portions of the Tahoe-Ukiah route; between Roseville, Auburn and Grass Valley; the Mother Lode from Auburn to Sonora; the Mountain Laterals, between Sacramento and Placerville, Clay and Jackson, Lodi and San Andreas; the All Year Highway between Merced and Yosemite; the Inland Coast Laterals, Gilroy to Califa, San Lucas to Hanford, and Santa Maria to Maricopa; the main line from Sacramento to Napa; the river lateral from Lodi to Suisun, Martinez to Richmond; the valley route from Sacramento to Bakersfield; the ridge route, Bakersfield to Los Angeles; and the coast route from San Francisco to San Diego. Work will also be done in San Diego, San Bernardino and Orange Counties.

It is understood, of course, that the particular hazardous portions along the above routes are selected for treatment.

The work under way at the present time is practically a duplication of the treatment of last year. A nine-foot strip adjacent each fence line is to be sprayed using from 1/10 to 1/6 gallon of Diesel Oil per square yard of surface. The burning operations are conducted under very specific instructions, and the crews engaged on this part of the work are expected to use every precaution not only to protect trees, shrubs, fence posts, and other inflammable property but also to use every precaution to protect traffic on the highway. Each crew is equipped with a Hauch torch to start fires and with Indian type knapsack fire pumps. A water tank or fire truck accompanies the crew. The protection of traffic is of first importance, the flagmen are stationed each side of an area being burned to hold back traffic or to pass them through under control whenever the smoke may in any way create a hazard.

Clearing of Forest Areas

The work of the Division of Highways in spraying and burning roadside vegetation to reduce fire hazards is supplemented by clearing in forest areas. Each fall and winter season crews are engaged in cutting and burning slash and down timber within the State rights of way. During the present biennium some $20,000 was allotted for this type of work. This sum is in addition to a considerable amount of work done out of the $400,000 emergency appropriation made by the California Highway Commission last November to help relieve the employment situation. The work is not complete so the extent to which this money was applied in brushing out and clearing up has not been summarized but a survey of roads on which this work was undertaken will show a worth while improvement in reduction of fire hazard.

We are approaching the matter from another angle also. This is in connection with our beautification work. We have selected a number of sections of road which are being developed as typical of what may be done to make the highways more attractive. In clearing up the right of way we are working toward a definite plan and naturally benefit accrues from a fire hazard point of view.

In addition to these specialized items of work the State is securing added safety from fires due to more strict specifications which are being followed in connection with clearing operations as part of highway construction projects. Greater attention is given to clearing up and burning in connection with such jobs. In the aggregate a large mileage is thus improved each year. The width of clearing is an effective fire break, and the improved roads permit of more rapid movement of fire fighting crews and equipment.

The work done and money expended in reduction of fire hazards is perhaps not of direct benefit in helping the traveling public to travel faster or more economically, but it is of a very decided economic benefit to the State as a whole and for that reason we are greatly interested in continuing and expanding the program.

(From a paper read before the Rural Fire Institute at the University of California.)

THE ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

HOSE lines are flat, uninteresting, docile objects until they become charged with water either from the hydrant or from a pumper. In this state, they wriggle, twist, turn, and go on a wild rampage unless precautions have been taken to prevent this. Experienced firemen know that few things can be as dangerous to life and property as a charged hose line, not properly controlled.

When companies roll to a fire, it is necessary to establish a main line of defense. A hose line is connected, even though it may not be used. A man is stationed at the nozzle. From then on the procedure remains undecided. Should the hose be charged with water, even though it may not be used, or should the nozzleman or officer signal when he wants the line charged?

In the box on this page is a letter that is the basis of the discussion in this issue. In the box on the following page is the question that will be treated in the next issue. Should you have some comments that you would like to add to the next discussion, you are invited to write to the "Round Table Editor," FIRE ENGINEERING, 24 W. 40th Street, New York, N. Y.

HERE IS THE PROBLEM

Read this letter—

I am captain of a ladder company in a village of about 6,000. The department is well manned and officered.

At present our chief has given explicit instructions for the men at the hydrant, or the pumper, to charge the first line stretched at any fire, regardless of whether or not the fire is seen, or whether it be known that the line is stretched and properly manned.

The Fire Council contends that this is not standard practice, that it is dangerous to the men at the nozzle, that it is wasteful of time and water, that it may cause unnecessary water damage should the pipe come open, and that it creates unnecessary work for the men in picking up and repacking the hose.

The reason for the order is that there are supposed to be enough volunteers on hand to stretch the line, get on the nozzle and get to the seat of the fire, or in position to play away before the paid driver can make the hydrant connection with such volunteer help as he may get. But I believe that the majority of trained volunteer departments do not charge lines without orders. Perhaps I am in error.

R. B. W.

—then the discussion.

Discussion of the Question

Of the many question and issues that have been treated in the Round Table department, it is doubtful if one has resulted in so marked a contrast of opinions. At any rate, the replies that have been received, are very interesting.

Wm. Ziegler, Chief, Hackensack, N. J.: Since the methods and rules in use in various departments differ, I can only say that the Hackensack department, by past experience, has found the most satisfactory method to be to have the first company arriving ready with a chemical line, the superior officer in charge to issue orders to subsequent companies arriving to lay water lines if necessary.

I have found, through my experience, that far better results are secured by not laying water lines until the superior officer finds it is absolutely necessary to do so.

When a water line is laid, and it becomes necessary to change the location of the apparatus, there is considerable delay in picking up the hose. In my department, no water is turned on until the signal is given by the men at the nozzle to show that they are ready.

John H. Monroe, Chief, Savannah, Ga.: We have a full paid department and therefore cannot give any information as to the working of a volunteer department. There is a standing order in our department, however, that requires all lines to be laid and charged with water as quickly as possible. The reason for this is, that in case large streams of water should be needed, we have them available at once.

We have experienced men to do this. The labor and time can hardly be considered, and at the same time the practice keeps the men thoroughly drilled and proficient in this part of the working of the department.

All of our pumpers are equipped with booster tanks and a great majority of the fires are extinguished with this equipment.

Victor H. Veit, Chief, Stamford, Conn.: The first line stretched at any fire should not be charged regardless of whether or not the fire is seen, or whether it be known that the line is stretched and properly manned.

Conditions differ at every fire. You may respond to a fire and your hydrant locations may not be so good. I would say in a case of this kind lay a line of hose but do not turn on the water if not needed as this will save time and unnecessary labor.

When responding to an alarm, if the fire is not visible we proceed directly to the location of the fire with the chemical and engine; then we have chemicals available, if needed, and often times that is all that is needed.

Should we find that a water line is needed we lay one from the fire to the hydrant and connect up our engine.

Should the fire be visible when approaching the location of the fire we lay a water line and connect up our engine as soon as possible and when ready for water, a siren is sounded from one of our machines. Water is never turned on until orders are given by the commanding officer.

Howard Stout, Chief, Bluffton, Ind.: In going to a fire we take at least one or two men and we generally lay a line to the fire but never turn it on unless we see we need it, and then only long enough to "knock it down" so we can use chemical lines and in that way we save a lot of water damage.

I think in a town of 3,000 or 6,000, people, however, that it is a good idea to always lay a line whether you use it or not as you never can tell what headway a fire will make and you can therefore save lots of time if you make a connection first. Every minute you save at the fire is important.

E. E. Finney, Chief, Marshfield, Wis.: In my opinion it is not good policy to charge the first line or any line of hose at a fire until it is properly manned. The importance of having everything ready at the "firing end" I believe is far greater than the saving of the few seconds it takes to signal for water. Then there is the danger of hose bursting if the nozzle is closed, especially if the water pressure is high. There is also an element of danger should the nozzle start zigzagging. Some one is liable to get hurt. It is safer to have the nozzle in

the hands of the nozzlemen and opened before the line of hose is charged, thereby reducing this chance of accident and delay from a burst hose. The chances for saving time at a fire can be best served by having everything in readiness to "shoot" before the line of hose is charged.

Clyde Pritchard, Chief, Jackson, Mich.: It is my opinion that no two cities, or villages fight fires exactly alike. Of course, we have a standard rules which practically govern all paid departments.

But in a Volunteer Department, there are several questions that would have to be determined before any one could give you a clear answer. Such as, how many firemen are there to each piece of apparatus? What orders have the engineers been given as to pump pressure?

Our orders are as follows: the first two engine companies arriving at a fire in the mercantile district shall lay two lines of hose, (one from each engine) but no line is charged until ordered by the commanding officer. In laying this line of hose, enough hose is pulled off the apparatus to cover the building and the pipe is attached ready for work.

In the residential district the second pumping engine to arrive at a fire will remain at hydrant so as to to be ready to lay a line if ordered to do so.

The same rule applies to factory district as the mercantile district, as I figure that an extra line of hose will not do any harm and will come in handy should the fire require it, and if not, can easily be picked up again.

C. Lee Barr, Chief, Winchester, Va.: In our Community of about 13,000 inhabitants with a fire area of 2,500 acres we have the following equipment: 1 Seagrave 1000-gallon pumper with 80-gallon booster; 1 American - LaFrance 1,000 - gallon pumper with 80-gallon booster; 1 Seagrave 600-gallon pumper with 80-gallon booster; 1 Community ladder truck and 1 Combination chemical truck. These trucks answer all alarms unless for an auto or chimney fire, then the nearest truck takes the alarm.

The system we use is as follows: the boosters are applied unless the fire has gained such headway that it cannot be extinguished, then a company lays a line of hose and one of the other pumpers connects to the plug for immediate action by orders of the officers in charge. By the cooperation of all departments this system has proved very effective to the extent of a great decrease in fire and water damage.

A. P. Allen, Chief, Ford City, Pa.: I cannot see the advantage of having a line laid and water turned into it when it is not known whether or not you will need it. I assume that the fire is inside of a building, and that several men have gone into the building with hand extinguishers and possibly a booster or chemical line. In this case I would have the men on the outside stretch a line from the hydrant, but no water should be turned on until called for by the commanding officer.

My reasons for this stand is that a great many inside fires can be controlled by the small hose just as effectively and with less damage than with a large stream. If there is a large line ready with the water turned into it, it is a temptation for the men at the nozzle to "give it to her plenty," without regard to what damage is being done by the excess water in the room, or in the adjoining rooms.

Our company is a volunteer organization, and about all the training that we get is from our own experience, what we can read from reliable sources, and what we get from men who rae in the fire-fighting game.

P. H. Hannan, Chief, Creston, Iowa.: I would say that in a city the size you describe with plenty of men and equipment the Chief is doing right when he requires the charging of the line.

In a city that is short on hose and other equipment as well as men, there would be some doubt about charging the line. You might lay a large part of your load, only to find a grass fire and the hose would not be needed. In this case you would be seriously delayed in getting to a fire (if one should break-out) up-town where the hose might be needed badly.

However with plenty of men and equipment let the water come, and give the boys practice, as well as being prepared to fight the fire.

Hugh F. Morris, Chief, San Mateo, Calif.: Our department regulations require an order from the officer or officers in charge to determine whether a line should or should not be laid. If line or lines are laid the operators of pumping engines await order before charging same.

We feel that these regulations are necessary in that they protect the firemen in the event that they are taking lines to the roof of a building. Without these regulations the line may become charged while they are being taken up ladders causing firemen to be thrown from ladders and sustaining serious injuries.

O. Mathews, Chief, Bozeman, Mont.: I believe, through past experiences, that it is best to lay a line of hose at every fire, but not to charge it unless the operators get a signal from the officer at the fire. I think it is a good idea to have a line of hose laid so as to be ready for any emergency that might arise. As far as it being extra work for the volunteers, I call it good practice for them and if you don't need the hose charge, it is not much work to replace it back in the truck. You should have your fire covered at all times regardless of the work entailed.

John J. Waltz, Chief, Easthampton, Mass.: We do not attempt to load lines until we are all set, because we feel that in doing so it becomes necessary to carry hose filled with water instead of empty hose. No great amount of time is saved if hose must be carried from the roadway around the building or up ladders. It is, I believe, easier to carry empty hose. Some time ago in this town, I attended a fire where the water was turned on before the connection was made or the nozzle was put on and the pressure at the hydrant was 100 lbs. The result was that most of the hose was washed out of the wagon and tangled up. The plan might work if you carry an expert nozzleman and had a great number of lengths of hose, but I consider it poor practice.

H. W. Bryson, Chief, Wenatchee, Wash.: If there is any smoke or fire to be seen we lay a line of hose from the nearest hydrant into the scene of fire. As soon as the truck stops, one of the men on the back places a hose clamp on the hydrant. The man's instructions are to turn on the hydrant and proceed along side the hose line in order to be on the look-out for leaks or kinks in the line. This clamp is sufficient to stop the water from entering the hose that is still on the truck, giving us a charged line to use if necessary either on the fire or to replenish our booster line. This has proven valuable in several cases.

N. Hummer, Chief, Delphos, Ohio: I do not believe in laying hose when it is not necessary. We have a Seagrave 1,000-gallon pumper with a 100-gallon booster tank and we only use our big hose say once in twenty times. I cannot see why we should take the time to lay a line of hose say once in twenty times. I cannot see why we should take the time to lay a line of hose when it is not necessary. In case you have a second call which is liable to happen you are ready to go, and if you have a line of hose out you must either take it up or load new lengths before you can do any good. There is never any time gained by laying a line of hose at every fire for with the up-to-date apparatus it is seldom necessary.

M. J. Dunphy, Chief, Sacramento, Cal.: It is our practice for the man at the hydrant to wait until he receives instruction from the commanding officer or some other member at the nozzle end before charging the line.

Rance Pettitt, Chief, Brownwood, Tex.: Our department consists of eight paid men, a paid chief and volunteer

(*Continued on page* 285)

HERE IS THE PROBLEM FOR THE NEXT ISSUE

Do you illuminate fire grounds at night fires?

What lighting equipment do you use?

How is the electric current provided, if it is used?

Do you believe lighting up the street in front of the fire building at night speeds up operations?

With the Editor

Vote for Firemen But Not Apparatus

Voters are sometimes an uncertain quantity, and this fact is never more true than when the electorate is asked to authorize some expenditure of the people's funds. An example of this occurred quite recently in a small New York State community.

The Fire Commissioners, feeling that the town was inadequately protected, placed two propositions before the citizens. One of these called for an appropriation for the employment of a paid Chief and four paid men; the other asked for approximately $19,000 for the purchase of an aerial truck.

When the votes were counted the Commissioners were amazed and filled with consternation to discover that the proposition for the men had been carried by a large majority, but that the plan to buy the truck had been buried under an even greater avalanche of votes.

Thus the Commissioners found themselves in the peculiar situation of being commanded by the people to hire a paid Fire Department but forbidden to furnish these men with the wherewithal to fight fires. The Commissioners then went before the people again with a proposition for a city service truck at the reduced price of $13,000. This was also vigorously turned down by the electorate.

The peculiar course of reasoning—if it is reasoning—that causes a voting community to perpetrate such a contradiction as this is hard to understand. Possibly the citizens were not properly instructed as to the need of the fire apparatus. Often the fault—when a campaign of this kind goes wrong—lies with the lack of proper publicity in placing the issue squarely before the people. At any rate, the town's Board of Fire Commissioners finds itself in a most unfortunate and unenviable position, while the people themselves are placed at the mercy of a serious blaze, with only themselves to blame for any consequences which may ensue.

Fire Alarm in Separate Building

The fire alarm system is the nerve center of the Fire Department. Upon it depends the quick and accurate response to calls from any portion of the municipality. It is, therefore, the height of folly to place this most important part of the fire-fighting system in any situation where it is liable to be placed out of commission through accident or fire.

While this fact is becoming more and more recognized as a vital principle in fire protection, yet many cities still house their fire alarm systems in buildings which, while not exactly a fire hazard, are by no means proof against the ravages of fire.

It is a recognized fact that a building—no matter how well constructed—is only as fireproof as its contents. The average City Hall or Municipal Building—which seems a favorite situation for the fire alarm system—is also filled with a mass of inflammable records, often none too carefully housed. If a fire once obtains good headway in this material, a hot blaze is bound to be the result and it is by no means beyond reason to assume that before it is under control the wires and apparatus of the fire alarm may be reached by the blaze, putting it at least temporarily out of commission.

It is certainly wiser—where this is possible—for the fire alarm system to be placed in a one or two story fireproof structure, isolated sufficiently from other buildings to insure against exposure fires. It is often quite possible to accomplish this by placing the fire alarm structure in a public park, as it requires comparatively little space, and such a park is liable to be situated in a central position, suitable for such a building. When considering the installation of a new system or the rehabilitation of the old one, the matter of situation should be the first consideration.

Orange or Blue Fire Box Lights?

A minor but withal rather earnest controversy has arisen between the advocates of orange colored lights to indicate the location of fire alarm boxes and those who favor a blue or purple shade.

On one point the controversialists are agreed, and that is that the red fire box lights should go, and the sooner the better. The similarity between such lights and the stop traffic signal is so great that motorists are continually mistaking the box lights for an order to stop, to their discomfort and possibly, also, to their danger. A story is told of a car driver who halted at a fire box on the corner of a less frequented street for half an hour, before he realized that the supposed traffic light was not going to change to green!

But as to the nature of the color to be chosen as a substitute for the formerly universal red for the fire alarm box there is no such agreement. The advocates of blue or purple argue that the orange light is too near in shade to red to be easily distinguished, especially for persons who are slightly color-blind. They also claim, with considerable justice, that the blue light—aside from its adoption by railroads in their signals—is not in general use and therefore would prove very distinctive for the designation of fire boxes, once the public became accustomed to it.

The proponents for the orange light pooh-pooh the idea that there is a similarity between it and the red traffic light. They say that the difference in shade is

very distinctive and cannot be confused. They also claim much greater visability for the orange than the blue light.

At any rate, whichever color is finally adopted, it will be a vast improvement over the confusing red light.

CHIEF TOM GRAHAM DIES SUDDENLY IN PORTLAND

For Many Years Chief in Corvallis, Ore.—Held Office in Pacific Coast Fire Chiefs' Association and I. A. F. C.

CHIEF TOM GRAHAM, of Corvallis, Ore., well known to Chiefs throughout the country, died at the home of his sister in Portland, Ore., March 22. A brief announcement of his untimely end from heart disease appeared in the previous issue.

The Late Chief Tom Graham Corvallis, Ore.

He was Past President of the Pacific Coast Fire Chiefs' Association and Past Vice-President of the International Association of Fire Chiefs. A new fire station completed in Corvallis, at a cost of $60,000, was named the Graham Station in honor of the Chief.

For some time Chief Graham had been in ill health. He had been taking medical treatment in Portland for over a year, and last summer spent several months in Honolulu in an attempt to recover his health. While there he received unusual honors and participated in fighting a disastrous waterfront fire.

His widow and a son nineteen years old survive.

The *Journal* of Portland, Ore., in commenting on the death of Tom Graham, said:

"Out of a pioneer Corvallis family and rich in the social gifts that appeal to mankind, he was esteemed and admired wherever and whenever known. He has responded to the last alarm and will go to rest amid the scenes of his joyous boyhood among the vales and hills of fine old Benton County."

Department Chaplain Dan Schively made the following tribute to the memory of Chief Graham:

"This department is not an organization; it is a family—a united family—and these men have worked together so unitedly and harmoniously that it is impossible to divide them. In speaking of the department you mean Tom Graham; in speaking of Tom Graham, you mean the department."

His end came at a time when he was concentrating all his thoughts and energy on making the convention trip of the Pacific Coast Association of Fire Chiefs, September 12, to Honolulu a great success. Having visited the Islands himself, he was boyishly enthusiastic over the prospects of having the members of the association enjoy a trip to places he knew. The trip now is being considered as a memorial to the late Chief of Corvallis.

Second Alarmers Have Donation Party

The tenth annual donation party of the Second Alarmers held on March 27 and 30, was well attended by the two platoons of the Philadelphia Fire Department and others. Four acts of vaudeville were billed for each of the nights, and ten prizes and a door prize were awarded. Following the entertainment, there was dancing until 12:30 a.m. Paul P. Delany acted as Master of Ceremonies.

The organization operates a coffee wagon and serves coffee and sandwiches to firemen of Philadelphia and outlying departments at every major fire, and during the summer, serves cold drinks.

EDWARD H. SPRANGERS.

Ionia, Mo., Buys Apparatus—Ionia, Mo., has purchased a chemical car.

Awards Made in Fire Waste Contest

Winning and honor cities in the 1930 National Inter-Chamber Fire Waste Contest were announced at the meeting of the National Fire Waste Council held recently at National Chamber headquarters.

The grand prize was awarded to Lakewood, Ohio, as showing the most notable progress in fire prevention. The winning cities in their respective classes were:

CLASS 1. Philadelphia
CLASS 2. Rochester, New York
CLASS 3. Grand Rapids, Mich.
CLASS 4. Lakewood, Ohio
CLASS 5. Mishawaka, Indiana
CLASS 6. Albany, Georgia

Again Philadelphia, Pa., was awarded the U. S. Chamber of Commerce Fire Waste Award for cities of 50,000 population and over. During a six-year period, Philadelphia has won the Grand Award twice and first place among Class One cities three times. In 1930 Philadelphia reduced its fire loss by $374,512. The local Chamber of Commerce gives Chief Ross B. Davis credit for this excellent record.

Honor cities in the order of their rating in the contest were:

CLASS 1.	CLASS 2.	CLASS 3.
Pittsburgh	Portland, Ore.	Erie, Pa.
Detroit	New Orleans	Wichita, Kan.
Milwaukee	St. Paul	New Haven, Conn.
Buffalo	Indianapolis	Dayton, O.
San Francisco	Houston	Syracuse, N. Y.
St. Louis	Kansas City, Mo.	El Paso, Texas
Baltimore	Newark, N. J.	Long Beach, Cal.
Cleveland	Akron, O.	Norfolk, Va.
Chicago	Seattle, Wash.	Nashville, Tenn.
	Toledo, O.	Youngstown, O.

CLASS 4.	CLASS 5.	CLASS 6.
Lansing, Mich.	Moline, Ill.	Coatesville, Pa.
Fresno, Cal.	Owensboro, Ky.	Marshfield, Ore.
Asheville, N. C.	Portsmouth, O.	Athens, Ga.
Huntington, W. Va.	Ardmore, Pa.	Pottstown, Pa.
E. Orange, N. J.	W. New York, N. J.	Woodward, Okla.
Pasadena, Cal.	Norristown, Pa.	Uniontown, Pa.
Bethlehem, Pa.	Oshkosh, Wis.	Hanover, Pa.
Kenosha, Wis.	Muskegon, Mich.	Morristown, N. J.
New Britain, Conn.	Newburgh, N. Y.	S. Orange, N. J.
Greensboro, N. C.	Baton Rouge, La.	Eveleth, Minn.

Awards will be presented at the meeting of the National Council in Atlantic City, April 28.

Chief Brosnan Speaks in Atlanta

Chief D. W. Brosnan, of Albany, Ga., Vice-President of the International Association of Fire Chiefs, addressed the Fire Prevention Committee of the Atlanta Chamber of Commerce at a luncheon arranged in his honor. Chief Brosnan has been the recipient of a number of honors because of the excellent fire loss record attained by his city.

He credited the fine showing in fire prevention work to the education of school children, the cooperation of the press and both the advertising and cooperation of civic organizations. Chief Brosnan described the operation of the night patrol that has been successful in locating about eighty-five per cent of the night fires.

Ft. Collins, Col., Reports Low Loss—Chief T. P. Treadwell of Fort Collins, Col., in his March report revealed a low fire loss for the city. The department responded to fourteen alarms during March, of which two were false. The estimated loss on all buildings involved was $168 while the loss on contents was $1,358.

THE COVER ILLUSTRATION

A fine job of laddering and quick work by the Boston Fire Department put a stop to a fire which had obtained great headway on the third floor of a five-story building in the leather district of downtown Boston. The first warning of the blaze came when a hot air blast blew out the windows. The fire started on the third floor and spread to the fourth. Three fire alarms were turned in. Fourteen different ladders, including four aerial ladders, were used in fighting this blaze. Special equipment at the fire included two searchlight wagons, fuel wagon, cars of the Boston Protective Department and an emergency wagon of the Boston Consolidated Gas Company.

Questions and Answers

NOTE—Readers are invited to send in questions, which will be answered in the order received. Names are omitted from questions unless otherwise specified

Values of Constants

To the Editor:

Will you kindly advise me where I can obtain the constants used in computing flow from smaller nozzle tips than 1 inch?

B. H. L.

Answer: The method of determining constants used in computing engine and nozzle pressures, where the nozzles are less than 1" in diameter, is as follows:

Multiply the diameter of the nozzle by itself three times and divide by ten. The result is the factor for this particular size nozzle on a single line of 2½" hose.

For example, the factor for ½" nozzle on 2½" hose is calculated as follows:

½ x ½ x ½ x ½ ÷ 10 or, .5 x .5 x .5 x .5 ÷ 10, or .0625 ÷ 10, giving us .00625, which is the constant for ½" nozzle on 2½" hose.

Advantage of Larger Suction

To the Editor:

Will you kindly give me a detailed explanation of the following questions?

1. Which of the following pump hook-ups will deliver the most gallons of water per minute: A pumper connected by a 2½-inch x 12-foot hard suction hose, or connected by 4½-inch x 12-foot hard suction hose with a 4½-inch x 2½-inch reducer connection to the fire hydrant? It is assumed that the fire hydrant will supply all the water that will flow through the 2½-inch outlet.

2. Will there be any difference other than the difference in friction loss?

3. Which hook-up would you recommend under all conditions where a steamer hydrant is not available and why?

D. R. E.

Answer: If the supply of water from the hydrant is sufficient to keep the 2½-inch hose charged under good pressure, employing the usual size of nozzle, then there would be no appreciable difference between the discharge as secured by use of 4½-inch suction as compared to the 2½-inch suction.

In this case the only difference would be in the very minor friction loss in the suction lines.

But the 4½-inch suction is the better hook-up, for in the event that a pumper is to be used where several lines of hose may be taken from the pumper, the larger size suction would eliminate a friction loss which might result in the pumper pulling vacuum, particularly where the supply from the main is hardly adequate.

But for cases where but one line is taken from a pumper, then it may be said that there is no advantage in using a 4½-inch hard suction line over a 2½-inch hard suction line.

Proper Way to Hold Life Net

To the Editor:

We have had quite a discussion lately in regard to the proper way in which to hold a life net, whether over-hand or under-hand. Would be glad if you would give us this information at your convenience.

J. L. N.

Answer: The correct way to hold a life net is as follows: In holding the net, men stand erect with left foot advanced, and the net is held at the level of the neck; each man holds the metal ring with both hands, palms upward. It is necessary to hold the net at this height so that there will be no danger of a person when jumping coming in contact with the ground due to the extension of the springs under tension.

Factors for Changing Hose

To the Editor:

In laying lines of hose to small or incipient fires this department was in the habit of laying a line of 2½" hose reduced to 1", but some time ago this 1" hose was replaced by 1½" hose. Kindly inform me as to what number to use in dividing length of 1½" hose to equalize 1½" and 2½" hose.

K. G.

Answer: The factors for converting 1" hose to 2½" is .011; the factor for converting 1½" hose into 2½" is .074. In each case you divide the length of the hose you are changing into 2½" by the factor shown and the result is the equivalent of 2½" hose from a friction standpoint. Both of the factors are for rubber lined hose.

Friction in Hose and Standpipe

To the Editor:

1. Will you give me the simplest calculation of the following layout. A line of 2½" hose equipped with 1¼" nozzle is stretched to the top of a 22-story building—220 feet in height. What would be the friction loss per 100 feet and what would be the back pressure?

This line is raised up the side of the wall on outside of building, and is fastened at every fire escape landing.

2. The same building has a 2½" siamese connection to a 3" standpipe. What will be the friction loss per story, also per 100 feet in the standpipe?

L. H.

Answer 1. There are two methods of securing the friction loss in this problem; first, to secure the flow and then by use of friction loss formula to determine the friction loss per 100 feet of 2½" hose.

The second method, and the one which is used commonly, is to first find the engine pressure. Deduct from the engine pressure the nozzle pressure and result is the friction loss in the stretch of hose from the engine to the nozzle. Dividing this by the number of 100 foot lengths in the line we get the friction loss per hundred feet.

But no nozzle pressure or engine pressure is given, so we will have to assume a nozzle pressure. A pressure of 50 pounds on a 1¼" nozzle is satisfactory. This pressure will therefore be assumed.

Engine pressure (not taking into account the back pressure due to elevation of nozzle) = N.P. (1.1 + K L)

K, for 2½" hose and 1¼" nozzle, is .248.

L, for number of 50 foot lengths of hose in line, is found as follows:

220 foot vertical stretch + 1 length on roof + 2 lengths on street = 370 feet. The nearest number of lengths to 370 feet is 8 (or 400 feet).

Hence L = 8.

Then E.P. = 50 x (1.1 + .248 x 8)
= 50 x 3.084
= 154.2 pounds. This is the pressure needed at the engine to overcome friction loss in the hose line and give nozzle pressure. As noted above it does not take into account the back pressure in the line up the face of the building.

The friction loss is found by subtracting the nozzle pres-

sure from the engine pressure or 154.2 — 50 = 104.2 pounds. There are 400 feet in the line, and the friction loss per hundred feet will then be 104.2 ÷ 4 or 26.05 pounds per 100 feet.

Answer 2. The friction loss in 3" pipe is approximately 39% of that in 2½" hose (this is secured by dividing 100% by 2.6 the factor for changing 3-inch rubber line hose to 2½" rubber line hose). The friction loss per hundred feet in a standpipe will then be 26.05 ÷ 2.6 or 10 pounds approximately.

This friction loss is, of course, for the same flow as we would have in the 2½" line stretched up the face of the building.

The saving by using the standpipe in this particular case is thus determined by subtracting 10 pounds from 26.05 giving us 16.05 pounds per 100 feet of standpipe.

CHIEF J. E. SMITH, NASHUA, DEAD OF HEART ATTACK

Believed to Have Brooded Over Great Fire Last May When City Suffered Large Loss—Well Known to Large Circle of Chiefs

By HARRY BELKNAP

CHIEF JAMES E. SMITH, of the Nashua, N. H., Fire Department, died suddenly from a heart attack on April 9. His death came as a shock to his legion of friends throughout the New England states.

He was born in Nashua on August 9, 1863, the son of the late Edward J. and Lydia Holt Smith. He attended the public schools in Nashua and when a young man was employed by Gregg & Sons.

The Late Chief James E. Smith

On December 7, 1886, he was appointed a call fireman and attached to Union Hook and Ladder Company No. 1. On March 1, 1901, he was elected Third Assistant Chief and two years later became First Assistant. In 1903 he was appointed a permanent member of the department. Mr. Smith was named Deputy Chief in 1916 and was appointed Chief of the department on May 3, 1918, serving in that capacity until the time of his death.

Mayor William F. Sullivan, of Nashua, issued the following statement:

"The city of Nashua has lost a faithful and efficient public official. His long service is fully appreciated. The citizens and city officials sympathize with the family and Fire Department in the loss of a head and leader."

Herbert C. Lintott, Chairman of the Board of Fire Commissioners, said:

"We feel that the city has sustained a very serious loss in his death. He had been a very efficient man; had given the best in him, and we know that he will be sorely missed, not only in the department but in the city as a whole for he was a man highly regarded and respected.

"Personally I feel that he never got over the shock of the great fire last May as he took it to heart very seriously and brooded over the loss. I don't think any human being could have done better than he did at that time or have handled the situation in a more efficient manner. His death is deeply regretted and the city has lost a valuable public servant."

Chief Smith was one of the founders of the New England Association of Fire Chiefs and had served on the Board of Directors. He was President of the Nashua Firemen's Relief Association and a member of the New Hampshire Firemen's Relief Association. He was an active member of the Fire Chiefs' Club of Massachusetts and of the International Association of Fire Chiefs. He was a familiar figure at the chiefs' conventions. Chief Smith belonged to the Nashua Rotary Club, Fraternal Order of Eagles, Nashua Lodge of Elks, and the Foresters. He is survived by his wife, one son, three grandchildren, two great grandchildren, and one brother.

The funeral was held on Sunday afternoon, April 12, and was attended by fire department officials from all over New England. Hundreds of persons lined the streets to pay homage as the funeral cortege passed enroute to the cemetery. The services were held in the First Universalist Church where the Rev. Otto Lyding paid an eloquent tribute to the departed chief. Pall bearers were A. J. Molloy, C. E. Carron, Peter Betters, M. E. Stevens, J. H. Varney, and W. E. Curtiss, all members of the Nashua fire department. There was an escort of Nashua firemen under direction of Deputy Chief Albert C. Melendy. There were many beautiful floral tributes. Burial was in Woodlawn Cemetery in Nashua. Music was furnished by the 197th Regiment Coast Artillery Band.

Among those attending the services were:

Mayor Sullivan, Fire Commissioners Lintott, Austin, and Dunkley, of Nashua; Chief Selden R. Allen, of Brookline, President of the New England Association of Fire Chiefs; Chief Henry A. Fox, of Boston; Herbert J. Hickey, Executive Secretary, Boston F. D.; Edward E. Williamson, Supt. of Maintenance Division, Boston F. D.; Chief Henry J. Hyatt, Fitchburg, Mass.; Chief Michael McPhee, Lawrence, Mass.; Ex-Chief Francis J. Morris, Lawrence; Chief Fred A. Clark, Attleboro, Mass.; Chief Arthur Montmeny, Chicopee, Mass.; Chief John W. O'Hearn, Watertown, Mass.; Chief W. H. Hill, Belmont, Mass.; Chief Charles L. McCarthy, Worcester, Mass.; Chief Patrick J. Hurley, Holyoke, Mass.; Chief William F. Woods, Portsmouth, N. H.; Chief E. B. Riley, Keene, N. H.; Chief C. M. Nash, Dover, N. H.; Ex-Chief E. Z. Jones, Dover, N. H.; Chief Timothy E. Driscoll, Peterborough, N. H.; Chief Charles H. French, Manchester, N. H.; Chief A. E. Soper, Mansfield, Mass.; Ex-Chief H. E. King, Mansfield; Chief George L. Johnson, Waltham, Mass.; Ex-Chief Daniel E. Johnson, Bridgeport, Conn.; Ex-Chief Reuben D. Weekes, Providence, R. I.; Supt. Peter E. Walsh, Boston Protective Dept.; Chief Henry J. Harrigan, Dedham, Mass.; Chief Charles H. Fuller, Pawtucket, R. I.; Chief Thomas Almond, Central Falls, R. I.; Chief Clarence R. Rendlett, Newton, Mass.; Chief William J. Sands, Quincy, Mass.; Chief Warren S. Belcher, Winthrop, Mass.; Chief T. H. Slaman, Wellesley, Mass.; Chief William H. Hawkins, Haverhill, Mass.; Chief A. J. Cote, Woonsocket, R. I.; Chief William C. Shepard, Pittsfield, Mass.; Chief James M. Casey, Cambridge, Mass.; Chief John A. Neary, Natick, Mass.; Ex-Chief John E. Sullivan, Plymouth, Mass.; Chief David A. DeCourcey, Winchester, Mass.; Chief Frank F. Dickinson, Brockton, Mass.; Chief John H. Savage, Valley Falls, R. I.; Chief John J. Hannigan, Norwood, Mass.; Chief Thomas H. Mahoney, Westfield, Mass.; Ex-Chief Irving F. Patt, Central Falls, R. I.; Lieut. Everett H. Patt, Central Falls; Chief Mellen R. Joy, Saugus, Mass.; Ex-Chief Edward F. Saunders, Lowell, Mass.; Chief Joseph E. Kelley, Danvers, Mass.; Deputy Chief W. A. Berry, Danvers; Chief Joseph Cribby, Somerville, Mass.; John P. Crowe, Asst. State Fire Warden; Chief Philip A. Ham, Everett; Lieut. Herbert Duprey, aid to Chief Smith, Nashua; Chief Edward E. Chase, Lynn, Mass.; Capt. John H. Day, Lynn, representing the Mass. State Firemen's Association; Chief Daniel B. Tierney, Arlington, Mass.; Ex-Chief Walter Peirce, Arlington; Chief Thomas H. Qualey, Medford, Mass.; Chief Frank C. Newman, Melrose, Mass.; Deputy Chief Albert J. Caulfield, Boston; Chief T. Robert Quinlan, Needham, Mass.; Chief Frank E. Tracey, Woburn, Mass.; P. Hildreth Parker, Belmont, president of the Box 52 Association, Inc.; Frederick H. Fay, Boston, Hubert Tracy, of the American Fire Equipment Company; Frank M. Tiffany, of the Gamewell Company; J. Wiley Edmands, of the Central Railway Signal Co.; Harry Belknap, of FIRE ENGINEERING; Justin McCarthy of the Henry K. Barnes Co.; Chief James C. Sullivan, of Lowell, Mass.; Bartleet Tyler, Belmont; C. J. Breslin, Watertown, Mass.; E. G. Moulton, Worcester, Mass.; Chief Samuel Daoust, Marlboro, Mass.; and Chief Albert F. Hildreth, Hollis, N. H.

House Inspection Reduce Fire Losses

Rigid inspection of building through efforts of the fire department of the City of Charlotte, N. C., is bearing fruit in the reduction of the city's fire loss, Hendrix Palmer, Chief of the Fire Department, said. Fire loss for the first three months of 1931 is $88,938.48 less than for the same three months of 1930.

Constant inspection of buildings is being given by a crew of firemen working under the direction of Captain H. C. Kissiah, director of the newly formed Fire Prevention Bureau. In close cooperation with this bureau are the inspectors of the inspection division of the city government, and these have accomplished good results in the elimination of fire hazards. The inspection division alone has brought about more than five hundred corrections in construction during the current fiscal year. In addition, many wiring systems have been condemned entirely, it was pointed out, and sixty old buildings have been condemned.

Firemen have been able to eliminate fire hazards through the discovery of rubbish and inflammable materials stored in buildings. They also gave attention to scores of "bridged fuses."

D. G. SPENCER, JR.

Chicago in Need of More Men—Fire Commissioner Albert W. Goodrich, of Chicago, has pointed out that the Fire Department needs more men and stressed the possible dangers resulting from the department not keeping pace with the growth of the city. Mr. Goodrich based his statement upon a report received from the National Board of Fire Underwriters.

LEAD AND OIL WAREHOUSE BLAZE SPREADS RAPIDLY

Five Alarms Turned for Fire That Started from Acetylene Cutting Torches — Chief Richard L. Smith in Charge of Companies

By WILLIAM E. PATTERSON

SEVEN firemen were injured, street car and vehicle traffic in East Ohio Street was paralized for several hours and freight and passenger trains on the Western Pennsylvania Division of the Pennsylvania Lines were temporarily delayed when a spectacular five-alarm daylight fire, caused by the carelessness of workmen, broke out and swept through a large warehouse of the National Lead and Oil Company's extensive plant, located at North Side, a large manufacturing center of Pittsburgh, Pa.

Fire was caused by two workmen employed by the Solomon Company, house wreckers, who were working in the building dismantling some old paint and oil storage tanks with acetylene torches. A spark from one of the torches ignited the oil and paint soaked wooden floor of the large structure.

An attempt was made by the workmen to extinguish the fire with hand extinguishers and pails of water, but the flames spread so quickly, that they were forced to give up and free from the burning building.

Five alarms were sounded, calling fifteen engine companies, three truck companies, the Chief of Department, one Deputy Chief and three Battalion Chiefs, with twenty-one pieces of motor fire apparatus.

The first alarm for the fire was sounded by an employee of the lead and oil company at 11:53 a.m., from a box located directly in front of the burning building. Engine Companies No. 2, 42 and 48 and Truck Company No. 46, answered the first alarm.

When the first alarm companies arrived, firemen found smoke issuing from the entire building. Dense clouds of acrid smoke drove the firemen back, making their efforts impossible as they attempted to enter the building to reach the seat of the fire and to ventilate the structure.

A second alarm was sent at 12:08 p.m., which brought Engine Companies No. 46, 49 and 51 and Truck Company No. 51 in command of Deputy Chief Frank G. Jones, and Chief Richard L. Smith.

As the fire continued to gain headway throughout the burning structure, the second alarm was followed by the third at 12:28 p.m., the fourth at 12:50 p.m., and the fifth at 12:54 p.m., bringing nine additional Engine Companies and one truck company to the fire; Engine Companies No. 18, 41 and 43 in command of Battalion Chief Martin J. Loebig of the Seventh Battalion; Engine Companies No. 44, 47 and 50 and Truck Company No. 50 and Engine Companies No. 7, 33 and 53 in command of Battalion Chief William H. Davis of the Third Battalion.

Eighteen Pumper Streams Used on Fire

Eighteen powerful pumper streams were directed into the burning structure from the tracks of the Pennsylvania Railroad on the north, the large storage yard on the east and from adjoining buildings of the Lead and Oil Company. Ten lines were laid into the fire from East Ohio Street and eight from River Avenue, pressure being furnished by fourteen pumpers. Eleven thousand feet of 2½-inch hose, were used with 1⅛ and 1¼-inch nozzles.

Firemen, under the direction of Chief Smith, confined their efforts almost entirely in keeping the fire from spreading to the main building of the plant, a large four story brick structure.

After several hours, the burning roof collapsed, and the flames shot fifty feet into the air.

Several tanks of thermolene gas, being used by the house wrecking company, ignited and caused flares of blue flames to shoot up during the early progress of the fire.

Seven Firemen Slightly Injured

Seven firemen, including Deputy Chief Jones, received minor cuts and injuries from falling glass, and were given first aid treatment by Daniel E. Sable, Police and Fire Surgeon.

The upper River Avenue manufacturing and warehouse district, located almost at the city line on the east, is a rather isolated section of the North Side.

No fire company quarters are located east of the fire zone. All fire companies which responded to the five alarms, approached the fire from the west, via. East Ohio Street to Heinz Street.

In order to get enough fire companies on the upper side of the fire, Chief Officers in command, were compelled to send their Aides back to Heinz Street to direct these Companies to proceed out East Ohio Street beyond the fire to the ramp at the Herrs Island bridge and to River Avenue and the fire.

The burned structure, which set back approximately one-hundred feet from River Avenue, was a four-story brick and wooden joisted structure of slow burning mill construction, with heavy wooden floors and supporting columns. It fronted eighty feet towards River Avenue and extended back one-hundred feet to the elevated railroad structure.

Two Views of the National Lead and Oil Company Warehouse Fire in Pittsburgh

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Boston Fire Develops Into 3-Alarm Blaze

Hampered by a gale of wind and a snow storm, members of the Boston Fire Department under command of Chief Henry A. Fox and Deputy Chief William F. Quigley, fought a difficult fire in South Boston, in March.

The first alarm was received at 10:18 p.m., while most of the apparatus in the South Boston district was engaged at another fire. A second alarm was ordered at 10:21 and a third alarm at 10:59. The fire was between the walls of a large old style frame 3-story building formerly used by the Perkins Institute for the Blind and later remodeled for a tenement. The high wind whipped the fire from the rear of the structure through the rooms and partitions of the upper floors until the flames were leaping high above the roof in spite of the concentrated efforts of firemen who directed streams from ladders and from a rear fire escape. Two wagon streams were used in the front of the building. Pressure was obtained from American-LaFrance pumpers. The wet condition of nearby roofs minimized the danger from sparks and flying embers.

Five firemen suffered injuries, two being seriously hurt—

one by a fall from a ladder and one by being struck with a falling roof beam while working on the top floor. The occupants of the house, including a number of children, escaped from the building soon after the blaze was discovered. A slate roof added to the difficulties of the firemen.

Flames were discovered by an occupant of the first floor of the duplex house, who smelled smoke and shortly afterwards heard the crackling of flames. He ran upstairs and notified the people there. Meanwhile his brother went out to sound the alarm. By the time the apparatus reached the scene the street was filling with smoke and the fire had obtained much headway in the rear of the building. In spite

Firemen Working at 3-Alarm Fire in South Boston

of the bad weather a large crowd was attracted. Fire Commissioner Edward F. McLaughlin came to the scene soon after the third alarm.

HARRY BELKNAP.

California Chiefs Guests of Ship Line

Over one hundred members and associates of the Pacific Coast Association of Fire Chiefs were guests of Los Angeles Steamship Company at a luncheon on March 27 aboard the S.S. City of Los Angeles, tendered to Chiefs of Southern California. Another luncheon will be tendered to the Chiefs on April 24. Up to the present, three hundred Chiefs and their friends have made reservations for the Honoullu trip to the Hawaii convention of the Pacific Coast Chiefs.

Incidentally the mysterious (and some claim it is ancient) order of Snapping Turtles are arranging for a series of initiations to enliven the trip. It is believed by officials of the order that many of the members will have to be reinitiated as "horse marines." The degree team is limbering up to properly instruct candidates in proper arm movements when giving the distress signal.

The party will leave Los Angeles at noon, September 12. A connecting boat from San Francisco will leave at 4 p.m., the day previous. Returning from Honolulu, the Los Angeles group will leave September 22 and will arrive in Los Angeles September 28. The San Francisco and Portland group will leave September 23 and will arrive in San Francisco on September 29.

WHAT'S BURNING

THE following list includes fires of $25,000 loss and over in the United States and Canada, for the periods designated in the headings. These figures, compiled from telegraphic reports, are based on estimates made at the time, and are subject to later investigation and consequent revision. Taken as a whole, however, they give an approximately correct view of the losses incurred. The figures represent loss in thousands of dollars.

Week Ending April 3	Loss in Thousands of Dollars
S. ROYALTON, VT.—Plant of Bracklebank Granite Co....	35
BEAVERDALE, PA.—Globe Theatre, adj. business property	85
COFFEYVILLE, KAN.—Plant of North American Car Co.	150
WEIRTON, W. VA.—Weirton Daily Times bldg. destroyed	80
TALLULA, ILL.—Post office and adj. property damaged	25
COHOCTAH, MICH.—Elevator owned by Floyd Lott, destroyed	25
COTTONWOOD, ALA.—Property of Rambo Lumber Mill	400
SPRINGFIELD, OHIO—Seven business houses destroyed	150
TULSA, OKLA.—Stock of Rosser-Moon Furniture Co.	40
MERIDEN, CONN.—Plant of Southern New England Ice Co.	25
OIL CITY, PA.—Lyric Theatre destroyed	25
DETROIT, MICH.—Store of Detroit Wholesale Hardware Co.	150
ST. ANNE, ILL.—Peaupre garage destroyed	65
ATHENS, ME.—Property of I. O. O. F. destroyed	25
BRISTOL, CONN.—Appell block, adj. property	30
ROYAL, WIS.—Several business establishments	50
CHICAGO, ILL.—Ideal Garage, N. Crawford Ave.	50
MOBILE, ALA.—Cotton whse. of Turner Terminals destroyed	300
HOLYOKE, MASS.—Bldg. of Max Stein at 499 Dwight St.	25
PATERSON, N. J.—Residential property at 352-358 Twenty-Fifth St.	25
NORRISTOWN, PA.—Property of John Wood Mfg. Co.	30
MONROE, LA.—Plant of United Carbon Co. 10 mi. north	40
RODNEY, ONT.—Canada Wood Products, Ltd., plant destroyed	65
CHICAGO, ILL.—Factory of C. F. Eckhart destroyed	25
ELFROS, SASK.—Hotel and adj. property destroyed	50
QUINCY, MASS.—Quincy market damaged	45
S. CAMDEM, OHIO—Broadway business and residential property	80
PATERSON, N. J.—Manhattan Hotel destroyed	200
LE MARS, IOWA—Kehrberg-Schneider dept. store destroyed	65
MARTINSBURG, W. VA.—Hustler bldg. damaged	45
PARRY SOUND, ONT.—Property of Parry Sound Motors	35
WILMINGTON, VT.—Business property on North Main St.	40
OTTAWA, ONT.—City hall destroyed	150
INDIANA, PA.—Smith building damaged	50
MILL CREEK, WIS.—St. Bartholomew's R. C. Church destroyed	25
CARMICHAELS, PA.—Garage of Albert Luxner, also 22 cars	25
AURORA, ILL.—A. C. Berthold Co., garage damaged	40
ELKINS, W. VA.—Moose bldg., Davis Ave., destroyed	45
YALE, OKLA.—Store of J. Archey destroyed	50
LEEDS, MASS.—State police barn and garage	35
PEABODY, MASS.—Property of Carr Leather Co.	25
SHREWSBURY, MASS.—Welwire Kennels of Dr. H. Gage	50

Week Ending April 10	
KANE, PA.—Business property at Farley & Greeves Sts.	80
BINGHAMTON, N. Y.—Buckley Photographic Studio destroyed	40
SPRINGFIELD, ILL.—Building occupied by Capital Tire Co.	65
HOLLISTER, CAL.—Whse. owned by Lathrap Hay & Grain Co.	50
NASHVILLE, TENN.—Dwelling of W. J. Cude, Gallatin Pike	25
S. PITTSBURG, TENN.—General store of Our's Inc.	25
ST. AUGUSTINE, FLA.—St. John's Hotel destroyed	25
ROBY, IND.—Storage house of Consumers Ice Co.	35
CAMDEN, N. J.—Four stores and apartment bldg. damaged	65
DALLAS, TEX.—Business property at 1005 Commerce St.	45
HATTIESBURG, MISS.—Several stores and offices	30
VICKSBURG, MISS.—Lumber plant destroyed	800
SEASIDE PARK, N. J.—Manhasset Hotel and six cottages	200
NASHVILLE, TENN.—Bldg. occupied by Tennessee Tractor Co.	35
FERNDALE, MICH.—Plant of Becker, Kohler & Co. Inc.	50
METROPOLIS, ILL.—C. C. Leonard woodworking mill destroyed	80
DETROIT, MICH.—Factory of Dependon Chemical Co.	65
STERLING, ILL.—Jefferson Cafe and Randolph Hotel	25
KIRKLAND, WASH.—Kirkland Cannery destroyed	65
LARGO, FLA.—Plant of Citrus Fruit Packers Assn.	50
BUFFALO, N. Y.—Bldg. occupied by Stone Clothing Co.	45
BROWNSVILLE, PA.—Plaza Theatre damaged	80
LAWRENCE, IND.—Yard and shops of Acorn Lumber Co.	45
EUGENE, ORE.—Graham block, stores and contents	180
DELMAR, N. Y.—Garage of Slingerlands-Elsmere Bus Line Co.	45
BROOKLYN, N. Y.—Cork Emporium, 115 Imlay St.	80
BROWNSVILLE, PA.—Plaza Theatre destroyed	80
KANSAS CITY, MO.—Plant of Southland Cottonseed Products Co.	45
CANTON, MISS.—Municipal Light & Water Power Plant destroyed.	45
LEXINGTON, KY.—Stables and horses on Hollywood Farm	80

New York Chiefs Will Meet in Glens Falls

As part of the annual convention of the New York State Fire Chiefs' Association, held in conjunction with the Mayors' Conference, there will be a training institute for fire chiefs. The meeting will be held in Glens Falls, N. Y., early in June.

Chief Joseph N. Sullivan, Utica, N. Y., President of the International Association of Fire Chiefs, will preside at all sessions. Fred Shepperd, Managing Editor, FIRE ENGINEERING, will speak on "Modern Methods of Fighting Fire."

The institute is part of the municipal training program provided by the Mayors' Conference for all city and village officers and employees in the state.

Durand, Wis., to Purchase Apparatus—Funds are being raised in Durand, Wis., to purchase fire apparatus.

Needham Erecting Fire Station

A combined fire and police headquarters building of handsome Colonial design is under construction in Needham, Mass., from plans by George Ernest Robinson, architect of Boston.

The structure has a central tower and two wings, one for the Fire Department and one for the Police Department, each unit being entirely separate from the other.

The building committee is composed of Arthur W. Littlehale, Chairman; Dana L. Southworth, Secretary; Henry D. Blackman, Leonard Dawson, William F. Brown, Chief T. Robert Quinlan, of the Needham Fire Department; and Police Chief Arthur P. Bliss.

The tower is sixty-four feet in height. The fire house portion of the building has three double doors for the passage

Architect's Front Elevation of the Fire Station Side of the Combined Fire and Police Building.

of apparatus. The basement contains the boiler room, ashhoist, meter room, whistle tank room, and storage battery room. On the first floor are the apparatus room, storage room for soda and acid charges, hose storage room, vestibule and watch room, outer and inner office for the Chief of Department, toilet, and shower bath, machine shop and office for the wire department, and the Gamewell fire alarm system in a separate fireproof room.

The layout of the second floor shows a large "Common Room" in front, dining room, kitchenette and closet, library, lockers, two rooms for officers, three dormitories, shower baths, toilets, and four sliding poles.

The police wing contains a boiler room and storage for lost and stolen articles in the basement, also a shooting range. On the first floor are the office of the Police Chief, office of the secretary, inspector's room, tape room, corridor leading to central rotunda where the booking desk is situated. Leading off this circular room are the guard room, matron's room, cell room, boy's detention room, and in the rear of this the emergency room and liquor storage room. There is a police garage with four doors. On the second floor are the recreation room, dining room, kitchenette, sergeant's room, two bedrooms, report room, lockers, toilets, and showers.

The tower will be fitted for use in drying hose. The floors are concrete and pitched roofs of slate. Construction is of brick. Work was started in November and the building is expected to be finished in July. The C. A. Batson Company, of Brockton, Mass., has the building contract. The Fire Department wing faces Chestnut Street and the police wing fronts on School Street. The cost of the building will be $100,000.

HARRY BELKNAP.

Davison Named Chief in Sudbury, Mass.—W. E. Davison has been appointed acting chief of the recently organized Fire Department in Sudbury, Mass.

Oklahoma City Broadcasts Radio Programs—On Mondays and Fridays of each week, the Oklahoma City Fire Department is sponsoring a fire prevention program over station WKY from 4 to 4:30 p.m. Several selections by a string orchestra and a band are used to fill out the program. Chief George B. Goff has been receiving a number of favorable comments for having arranged these fire prevention radio programs.

Illinois Course to Be Held in June

A tentative program has been arranged for the seventh annual Short Fire Course that will be held at Champaign, Urbana, Ill., June 23-26. Many phases of fire department work will be demonstrated.

On Tuesday, June 23, there will be a talk on "Chemistry of Fire," by D. T. Wright, Engineer, National Board of Fire Underwriters, and work in first aid and life saving by Walter J. Welch and Edward Clark of the Rockford Fire Department.

The following day, S. L. Legreid, State Fire Marshal, will speak on arson activities. Richard E. Vernor will have a paper on "The Firemen's Job in Fire Prevention," and Clarence Goldsmith, Assistant Chief Engineer, National Board of Fire Underwriters, will talk on hydraulics and friction losses.

The following talks have been scheduled for Thursday: "Electrical Hazards," Mr. Chanaberry, Kentucky Actuarial Bureau; "Salvage Overhauling and Ventilation," by Frank C. McAuliffe, Chief of Fire Insurance Patrol, Chicago; "Fire Hazards and Their Correction," by H. A. Reinebach, District Inspector, Illinois Inspection Bureau; also round table discussions and demonstrations.

For Friday, "Classification of Towns," by R. E. Freeman, Illinois Inspection Bureau," and round table discussions. In the afternoon there will be evolutions at the drill tower.

There is a bill before the Illinois legislature to appropriate the necessary funds for completing the erection of the drill tower at the University and for buying the necessary equipment.

Newly Elected Chiefs

The following have been elected to head the Fire Departments in their respective municipalities:

Port Washington, N. Y.—Wallace Lawrence
Yamhill, Ore.—Ben Reimers
Park Ridge, Ill.—Herman A. Miller
Algona, Ia.—Oscar Anderson
West Hazleton, Pa.—W. F. Snyder
Hazleton, Pa.—John Liebner
Hancock, Wis.—George Baum
Lomita, Cal.—L. Schingler
Clay Center, Neb.—Ernest H. Wellman
Rolla, N. D.—S. D. Johnston
Elgin, Tex.—Herman Fischer
East Dubuque, Ill.—Urban Tranel
Conrad, Ia.—Lester Jones
Oakland, Ia.—C. E. Baxter
Summer, Ia.—Emer Kroblin
Schaller, Ia.—John Genry

San Antonio Votes for a Civil Service

Members of San Antonio, Texas, Fire and Police Departments, including the heads of both departments, now are under civil service and cannot be removed from their positions except for just cause.

This is the result of the adoption of an amendment to the city charter, at a special election held recently, and which carried by a vote of 7,442 to 1,913.

A civil service commission of five members has been appointed by Mayor C. M. Chambers, and is now setting up a plan to operate these two department under the regulations as adopted.

It has been decided that present members of each department will not have to pass examinations, but will come within the disciplinary and other regulations of civil service. It affects five hundred men in the two departments.

A. B. COCHRANE.

Norton, Mass., Orders Pumper—Norton, Mass., has placed an order for a 500-gallon pumper.

New Apparatus Delivered to Ardmore, Pa.

A fire apparatus unit that carries its own water has been built by the Autocar Company for the Merion Fire Company of Ardmore. The apparatus has a 500-gallon Hale pump and carries 1,400 feet of 2½-inch and 600 feet of the smaller size hose. In practice it is possible to use a stream of water from the tank, while the pumper is being connected to a hydrant.

Chief Parks of Hannibal Dead

Chief T. B. Parks, for forty-four years head of the Fire Department in Hannibal, Mo., died in the Levering Hospital at the age of seventy-two. He had been in failing health during the past three years.

He was born in Louisiana, Mo., but while a small boy, he and his parents moved to Hannibal. Chief Parks entered the fire service in 1875 as a minute man. He was promoted to hoseman and made head of the department in 1887.

Chief Parks was one of the founders of the Missouri Fire Chiefs' Association, of which he was one time President. His widow and three children survive.

How It Used to be Done

Included in the annual report of the Boston Fire Department for 1862 are instructions for persons holding signal keys. They are rather amusing when considered at the present time.

1. If a fire is discovered in your vicinity, go to the nearest box in the district.
2. Turn the crank twenty-five times, rather slowly at first, and increasing gradually to the last. If possible, wait at the box and direct the firemen to the fire.
3. If you hear no reply at the box, or on the bells, turn again. If no reply after the third time, go to another box in the district.
4. The police, upon hearing the bells, will spring their rattles, and call the number of the district and station.

Where the Match Caught a Mouse

Stories of mice starting fire while gnawing at matches are not at all uncommon, but it is unusual to find verification of the incident.

The Glenside, Pa., department was called at four a.m., to fight a fire two doors away from the fire house. The fire was found at the foot of a stairway in a private residence. Clothes found there were taken outside for examination.

The owner had matches in almost every pocket and there were chicklets in one pocket. A pocket in the vest was found on fire and this had ignited other parts of clothing. In the vest pocket was found five burnt matches while matches in other pockets were not touched. Some one suggested the theory of mice and matches. The company was sent back to the station while Chief Thomas Diehl investigated. The mouse was found in a closet, singed, but still kicking.

Chief Diehl said that while other unexplainable fires may be blamed on mice, he has converted one person to the use of safety matches.

Hoseman Awarded Boston Traveler Medal—Daniel J. Canniff, hoseman of the Woburn, Mass., Fire Department has been awarded the "Boston Traveler" Medal of Honor for rescuing four persons from a burning building in January while he was on a day off.

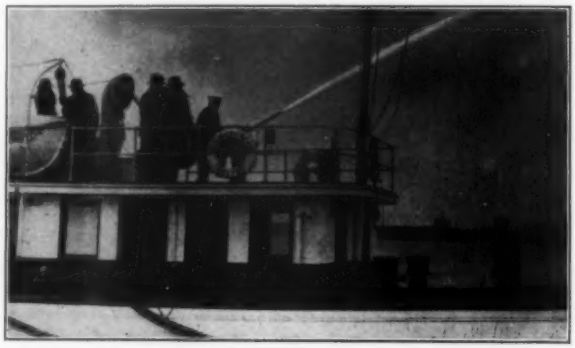
Rescue Car Delivered to Hempstead Fire Department

The Fire Department of Hempstead, L. I., N. Y., has a Mack rescue car equipped with a 2 kw. generator which supplies three 500-watt portable lamps for floodlighting. It is also equipped with a cutting torch outfit, two inhalators, oxygen breathing helmets and other miscellaneous equipment for emergency work.

Police Boat Equipped With Deck Pipes

The new police boat "Stephen O'Meara" recently completed at the yard of the George Lawley & Son Corporation, Neponset, Mass., for Boston from designs by Gordon Munroe, is equipped with auxiliary fire pumps and two deck guns, one of which has a capacity of 1100 gallons of water per minute.

A test of the fire fighting equipment of the boat was held in Boston harbor and was witnessed by Police Commissioner Eugene C. Hultman, Supt. Edward E. Williamson, of the Maintenance Division, Boston Fire Department; and W. C. Bailey, supervisor of high pressure, Boston Fire Department.



Test of Deck Gun on New Boston Police Boat

The vessel is built of wood and has a triple expansion steam engine. There are two Scotch boilers. The boat is 118 feet in length overall; 107 feet, 7 inches length on the waterline; 10 feet, 1 inch depth of hold; 22 feet, 6 inches beam; and 9 feet draft. The frames and planking are of white oak and the decks and houses of white pine. The deckhouse contains a room aft for the commissioner and a lounging and mess room forward for the crew. The cost of the boat was $200,000.

Massachusetts Firemen's Convention

The annual convention of the Massachusetts State Firemen's Association this year will be held in Lynn, Mass., with sessions at the New Ocean House in Swampscott on September 22, 23, and 24.

Deputy Chief James S. Koen, of Salem, is President of the association; Daniel J. Looney, of Boston, is Secretary; and M. Joseph Manning, of Milton, is Treasurer.

The convention committee is composed of Captain John H. Day, of Lynn, Chairman; M. J. McGonagle, Boston; Chief William C. Mahoney, Peabody; and M. Joseph Manning, Milton.

The Ladies' Auxiliary, of which Mrs. Flora C. Day is President, will also meet at the same time and this organization invites the wives and feminine relatives of all Massachusetts firemen to join.

HARRY BELKNAP.

Apparatus Delivered to Peoria, Ill.—New fire apparatus has been delivered to Peoria, Ill.

Gardner, Mass., to Buy Pumper—Gardner, Mass., has voted to purchase a pumper to be placed in the Central Fire Station.

Five Dead in Sanitarium Fire—Four patients and an orderly lost their lives when fire destroyed a cottage of a private sanitarium at Jamestown, R. I.

Chief C. J. Beatty Presents Report—According to the annual report of the Jamestown, N. Y., Fire Department, submitted by Chief C. J. Beatty, there were 451 fire alarms of which 181 were caused by fires within buildings and twenty-nine calls were false or unnecessary.

Medals Awarded Boston Firemen—Six members of the Boston Fire Department were presented with medals by the Massachusetts Society for the Prevention of Cruelty to Animals for leading twenty horses from the stable of the Sanitary Department during a recent fire.

The Round Table

(*Continued from page 276*)

firemen. We have two pumps and two combination hose and chemical cars.

The drivers are instructed to stretch a line of hose and to charge it whether there is any fire in evidence or not—that is if the call is in the business section. In the residential area, they wait for orders.

L. R. Morris, Chief, Ames, Ia.: We do not lay in a line at all fires. We put out about seventy-five per cent of our fires with chemicals. In the residential section if a fire looks bad, we lay in a line and wet it down and then take a chemical line into the building or use a hand chemical.

If you have a small fire and there is snow on the ground, or the streets are not paved, the hose becomes wet and dirty and it requires time to take up the hose. If the hose is not used, it is then in condition for another run should an alarm come in when the apparatus returns to quarters. Sometimes we lay the hose and don't turn on the water unless there is a need for it.

I have followed this practice for some time with good results. However, I don't take any chances. If conditions look bad, I lay a line and keep it charged.

G. W. Hedden, Commissioner, Buffalo, N. Y.: Department rules prohibit the charging of any line at a fire except upon orders from an officer.

C. E. Willert, Chief, Mt. Clemens, Mich.: In all cases except gas or chimney fires, a line is stretched but not charged until an order is given by the officer in charge. He first determines whether it can be handled by the small extinguisher or booster line. This is done to keep down the water loss.

Fred S. Bullent, Chief, Rensselaer, N. Y.: Irrespective of whether a fire can or cannot be seen when we roll in, no lines are laid until ordered by the chief officer or the officer in charge. No lines are charged until ordered by an officer. He sees that all nozzles are properly manned, before he gives the order to have the lines charged.

H. J. Mjelde, Chief, Livingston, Mont.: I do not believe in charging any line without instructions from the men at the nozzle.

James Schooley, Chief, Medina, N. Y.: My orders to hydrant men is never to charge lines until the order to do so is given by the officer in charge. It would be very dangerous to charge lines from a pumper unless there were enough men to properly hold the nozzle.

Robert Agamedi, Chief, Lock No. 4, Pa.: We have forty-five men with a part time paid driver in our volunteer fire department.

When we are at a fire, we lay a line of hose, and no water is turned on until the man at the hydrant has orders to do so. We follow this procedure, regardless of the size of the fire.

If the fire is a small one that can be extinguished by chemicals, and the house has not been ventilated, we lay a 2½-inch hose line, charge it, ventilate the building and extinguish the fire with chemicals. The charged line is used as emergency measures.

Herman J. Amish, Chief, Iowa City, Ia.: Our department consists of seven paid men and fifteen volunteers. We always lay a line to the fire but do not charge it until one of the officers or men at the nozzle give the command. We think more of the possible water damage than we do of the waste of time and water.

M. E. Clark, Chief, Williamsport, Pa.: The first company to arrive does not stretch a line unless the fire can be seen. The second company due stands by at a hydrant for orders although the first company stretches a line from the hydrant if necessary. This system has worked out well.

H. L. Waugh, Chief, Fulton, N. Y.: In laying hose, the hydrant man makes the coupling and starts the hydrant only to release the strain. Upon signal or by direction of the officer at the nozzle, the hydrant man gives full pressure, when needed.

Since most alarms are for small fires and may be handled by chemicals, we find our practice has worked to our satisfaction. Dry hose can easily be rolled up and reloaded on the apparatus.

Charles Smalenberger, Chief, Meadville, Pa.: Our department is volunteer with the exception of the drivers. Upon arriving at a fire, one company stops at a hydrant. No hose is laid unless fire is seen. And if a line is laid, no water is turned on without orders from the officer in charge.

William T. Hall, Chief, Plainfield, Conn.: We never allow a line to be charged until we get orders from the men at the nozzle that everything is ready. Once, many years ago, water was turned on before a nozzle had been connected. This caused considerable delay, knocked down a man, and drenched others.

Thomas F. Dillon, Chief, Grand Island, Neb.: We get orders to turn on water from the man at the nozzle. Many times we do not need water, for seventy-five per cent of the fires are extinguished with the aid of chemicals.

Henry J. Schulz, Chief, Ashland, Ohio: Our department has five paid men and seventy volunteers. I think it would be unnecessary to lay a line without first knowing that it would be needed. My report last year showed that of the 140 calls that we answered it was only necessary to lay 2½-inch hose six times.

E. V. Stone, Chief, Ludlow, Mass.: There comes to mind so many reasons why lines should not be charged until nozzlemen are ready, that a list of these reasons would certainly be lengthy.

Arch Baker, Chief, Frostburg, Md.: The line of hose should be laid at the command of the officer in charge, and water should not be turned on unless ordered by the officer.

George A. Wood, Chief, Niagara Falls, N. Y.: The first company with chemical equipment goes direct to the fire; the second stretches a line. We never turn on water until ordered to do so by the nozzleman, and we always open the hydrant full.

Siamese Eliminates Hard Suction

A special siamese using two 2½-inch lines for discharge has been developed by the P-B Products Company, St. Louis, for use with the M. & M. water siphon that is used for discharging water from cellars and so forth. The siamese connection makes it unnecessary to use hard suction with the siphon. One end of the siamese is connected with the siphon and two lengths of 2½-inch hose are connected to the siamese outlets. The line on the right is used to convey water to the siphon while the two upright lines are for the discharge.

Siamese Connected With Siphon

Jackson to Hold Drill School

All departments in Mississippi have been invited by Chief L. F. McDonald of Jackson, Miss., to attend their Annual Drill School that will be held in that city beginning May 11. It will be in charge of District Chief George R. Ward, Drill Master of the St. Louis Fire Department.

Motion pictures of interest to fire departments will be shown during this school.

Forest Service Has Fireboats

The Forest Service of the United States Department of Agriculture recently acquired by transfer from the Bureau of Biological Survey two 26-foot boats, which it is intended to equip as fire boats for use in the Superior National Forest in Minnesota. With the aid of high-powered pumps and a mile of hose, foresters hope to be able to use water from lakes for fire suppression. The Superior National Forest is in a region of many lakes and the only means of travel over much of the forest is by water.

FIRE DEPARTMENT ACTIVITIES

Brentwood, Pa., Receives Apparatus—New Ahrens-Fox apparatus has been delivered to Brentwood, Pa.

Mt. Wolf, Pa., May Buy Apparatus—Mt. Wolf, Pa., is considering the purchase of fire apparatus.

Apparatus Delivered to Dunbar, Pa.—A triple combination pumper has been delivered to Dunbar, Pa.

Permanent Chief Urged for Greenfield, Mass.—A permanent Chief has been recommended for Greenfield, Mass.

Fire Station Opened in Floral Park, N. Y.—A new fire station has been opened in Floral Park, N. Y.

Apparatus Delivered to Port Republic, N. J.—New fire apparatus has been delivered to Port Republic, N. J.

Cardiff, N. J., Erecting Fire House—Work has been started on a new fire station for Cardiff, N. J.

Vanlue, Ohio, Wants Fire Apparatus—A movement has been launched in Vanlue, Ohio, to secure fire apparatus.

Southwest Greensburg Buys Pumper—An order has been placed by Southwest Greensburg, Pa., for a 500-gallon pumper.

Loveland, Cal., to Buy Apparatus—Loveland, Cal., is considering the purchase of fire apparatus for the protection of rural property.

Cincinnati to Erect Fire Station—Plans are nearly complete for the erection of a Colonial type fire station to cost $40,000.

Pittsfield, Mass., to Erect Fire Stations—Pittsfield, Mass., is considering the erection of two bungalow fire stations to cost $16,000 each.

Wilmington, N. C., to Erect Fire House—Plans and specifications have been prepared for a new fire station to be erected in Wilmington, N. C.

Fort Worth to Open New Station—A new fire station in Fort Worth, Tex., will be formally opened the early part of April.

Ashland, Pa., to Keep Old Relic—Ashland, Pa., will keep its old hand drawn ladder truck as a relic of former fire fighting methods.

Oroville, Cal., May Erect Fire House—Oroville, Cal., is considering the erection of a fire station to cost $18,000, exclusive of the land.

White Cars for Evansville, Ind., Chiefs—Two automobiles have been purchased for the use of Chief Carter of Evansville, Ind., and his two assistants.

Apparatus Delivered to Olcott, N. Y.—Combination Buffalo booster and chemical apparatus has been delivered to Olcott, N. Y.

Falmouth, Mass., to Purchase Ladder Truck—Falmouth, Mass., has voted to appropriate $9,000 for the purchase of a ladder truck.

Apparatus Urged for Des Moines, Ia.—The Mayor of Des Moines, Ia., favors a plan of buying one piece of apparatus each year until the present old units are replaced.

Winston Salem to Buy Apparatus—The Council of Winston Salem, N. C., has authorized the purchase of fire apparatus. The department now has seven units.

Strohm Renamed Iowa Fire Marshal—Governor Dan Turner of Iowa has reappointed J. W. Strohm as State Fire Marshal. The term is for four years and will begin July 1, 1931.

Hannan, Fire Commissioner of Malden, Mass.—John H. Hannan has been appointed Fire Commissioner of Malden, Mass., to serve a three-year term. Mr. Hannan is also a former Fire Commissioner.

Fire Station Erected in Davenport, Ia.—A fire house has been erected at Davenport, Ia., at a cost of $22,000. It is located at Lindsay Park. The basement will be used as rest rooms for patrons of the park.

Relief Fund Planned for Firemen—An attempt is being made to establish a relief fund for the Dallas, Tex., firemen. A book containing the history of the department is being sold, the entire proceeds to go to the fund.

Outside Companies Respond to Saugus Fire—Chief Mellen R. Joy, of Saugus, Mass., called outside aide when fire broke out in a local theatre. Companies responded from Everett, Malden, Lynn, Revere and Boston.

Southwest Washington Firemen Meet—A meeting has been held in Raymond, Wash., to form the Southwest Washington Firemen's Association. Chief E. J. Tresse, of Raymond, was elected President and Chief Dan Coulter, of South Bend, was named Secretary-Treasurer.

Railroad Sued for Loss of House by Fire—A resident of Ayer, Mass., has entered a $3,000 suit against the Boston and Maine Railway on the ground that her home was destroyed because fire apparatus was delayed by freight cars left so as to block the road.

Chief Breeder Explains Cover-Up System—Chief Henry W. Breeder of Egg Harbor, N. J., spoke at a recent meeting of the Monmouth County Fire Chiefs' Association in Deal and explained the advantages of a cover-up system. The next meeting of the association will be held April 27.

Denver, Col., Has New Type Fire Alarm Boxes—A new type fire alarm box has been placed in service in Denver, Col. Previously it was necessary to break a glass before gaining access to the controlling handle. In the new type, the box is operated by opening a door and pulling down a handle.

Port Arthur, Tex., to Have New Alarm—A new fire alarm system consisting of eighty new fire alarm boxes and twenty-five miles of new wire, most of which will be installed underground, will be established in Port Arthur, Tex. It will cost $35,000 when completed.

Southwest Chiefs Favor School Bill—During the meeting of the Southwest Fire Chiefs Association in Dallas, Tex., the Chiefs indorsed a legislative bill to appropriate $45,200 to establish a fire training school at the Texas A. & M. College. The bill would provide a three-year program of training.

Ex-Chief Mantor Wins Accident Suit—George M. Mantor, formerly Chief of the Seattle Fire Department was the victor in an action for $25,350 brought by a woman who was hurt when fire apparatus blew up during an exhibition run in August, 1929. Counsel for the woman said that a new suit would be started naming the city of Seattle as defendant.

Urges Better Looking Fire Stations—The Chairman of the Chamber of Commerce Borough Planning Committee, Queens, New York City, has started a campaign for better appearing fire stations. The chairman believes that the appearance of these houses could be greatly improved without any additional cost.

Al. Smith Retains Interest in Firemen—Former Governor Alfred E. Smith, while visiting in Pinehurst, N. C., with William H. Todd, New York shipbuilder, visited the local fire station after the fire whistle had blown. He explained to the Chief, "I was a volunteer fireman in New York when I was a young chap."

Banquet Tendered Chief Sullivan, of Lowell—A banquet was arranged on March 25 to honor Chief James C. Sullivan, of Lowell, Mass. The Chief was presented with a traveling bag. Chief Selden R. Allen, of Brookline, President of the New England Association of Fire Chiefs, was one of the speakers at the dinner.

School Planned for Nassau County, N. Y.—Sixty members of the Nassau County Fire Chiefs' Association held a meeting in Rockville Center, L. I., to consider the forming of a training school for volunteer firemen. At present there is no provision for the maintenance of such a school by the county and some method must be found for financing this course of instruction.

Change Made in Bridgeport Firemen's Hours—Fire Commissioners of Bridgeport, Conn., have decided to give the firemen two days off each month for a period of nine months, and a two weeks vacation in the summer. The commissioners did not approve the petition of firemen for permission to establish a social and welfare organization similar to that in the local police department.

Ex-Chief Broderick of Detroit Dead—James C. Broderick, for ten years Chief of the Detroit Fire Department until his retirement in 1917, died in St. Mary's Hospital, Detroit, at the age of eighty-six. In 1871 when he was a company foreman, he was a member of one of the two companies picked to go by special train to Chicago at the time of the famous conflagration. He was married twice but there were no children from either marriage.

PROPOSED IMPROVEMENTS

Nepean Township, Ont., Canada—Nepean Fire Commn., under chairmanship of T. Gordon Kenyon, is considering the matter of fire apparatus for fire brigade.

Prescott, Ariz.—Fire Commn. to recommend to city council inclusion of $5,000 item in 1931-32 budget to overhaul fire alarm system. Council also considering purchase of quadruple truck. A. E. Henry, Chief.

Montecito, Calif.—City to award contract soon for new $20,000 fire station on site of present station. More fire equipment will be added and more firemen appointed, according to reports.

Brockton, Mass.—Muncipal Fire Committee purchased a $17,000 Ahrens-Fox aerial ladder truck to be stationed at Central fire headquarters. Frank F. Dickinson, Chief.

Merion, Penn.—Plans are being prepared for construction of fire station to be erected on Manoa Rd. for the Pennwynne Fire Co

Wilmington, Vt.—Reports state funds were appropriated for purchase of new fire truck at recent town meeting.

Santa Maria, Calif.—Fire Chief F. Crakes states present fire system is inadequate. C. W. Smith and Marion Rice appointed to confer with chief and report findings at later meeitng.

Gridley, Calif.—Efforts to obtain motorized fire equipment for use in Butte County are being made by Fire Protective Committee of Butte Co.

Seattle, Wash.—Preliminary plans have been prepared for $34,000 fire station at 23rd Ave. and Yesler way, to replace present station there.

Wanted
Sales Engineers

Manufacturer of established FIRE ALARM equipment desires experienced Salesmen. Give reference and lines now handling. Address: Box 380, c/o FIRE ENGINEERING, 24 West 40th St., New York.
4-15, 29

CONVENTION DATES

April 14-15—NORTH CAROLINA FIRE SCHOOL. To be held at Durham, N. C., under auspices of North Carolina State Firemen's Association. Conductor, Sherwood Brockwell, State Insurance Department, Raleigh, N. C.

April 15—WESTCHESTER COUNTY FIRE CHIEFS' EMERGENCY PLAN. Regular Meeting, Fire Headquarters, Larchmont, N. Y. Secretary-Treasurer, E. Riviere, Fire Headquarters, Larchmont, N. Y.

April 27-29—TEXAS FIREMEN'S TRAINING SCHOOL. 2nd Annual Meeting, Agricultural and Mechanical College of Texas, College Station, Tex. Director, H. R. Brayton, College Station Tex.

May 11-16—NATIONAL FIRE PROTECTION ASSOCIATION. 35th Annual Meeting, Toronto, Ont., Can. Managing Director, Franklin H. Wentworth, 60 Batterymarch St., Boston, Mass.

May 13—DEL-MAR-VA VOLUNTEER FIREMEN'S ASSOCIATION. 2nd Annual Convention, Smyrna, Del. Secretary, J. Emory Parks, Cambridge, Md.

May 18-20—FLORIDA STATE FIREMEN'S ASSOCIATION. 6th Annual Convention, Jacksonville Beach, Fla. Secretary, P. F. Pfaender, Winter Haven, Fla.

May 21—IOWA STATE FIRE CHIEFS' ASSOCIATION. Annual Convention, Ames, Iowa. Secretary-Treasurer, Chief L. R. Morris, Ames, Ia.

May 23—NEW JERSEY STATE FIRE CHIEFS' ASSOCIATION. Quarterly Meeting, Madison, N. J. Secretary, Fred A. Trowbridge, 17 South Street, Morristown, N. J.

May 25-27—OKLAHOMA STATE FIREMEN'S ASSOCIATION. 37th Annual Convention, Oklahoma City, Okla. Secretary-Treasurer Charles Slemp, 820 East 19th Street, Oklahoma City.

June 3-5—NEW MEXICO STATE FIREMEN'S ASSOCIATION. 9th Annual Convention (Combined with Firemen's Short Course), Clovis, N. M. Secretary-Treasurer, Theodore A. Rosenwald, Albuquerque, N. M.

June 6-7—SOUTHERN CALIFORNIA FIRE CHIEFS' CLUB. Next Meeting, Lompoc, Cal. Secretary-Treasurer, Charles E. Smith, Chula Vista, Cal.

June 8-9—SOUTH CAROLINA STATE FIREMEN'S ASSOCIATION. 26th Annual Convention, Aiken, S. C. (Tentative date). Secretary, R. S. Hood, Sumter, S. C.

June 8-10—KANSAS STATE ASSOCIATION OF FIRE CHIEFS and KANSAS STATE FIREMEN'S ASSOCIATION. 15th and 44th Annual Convention, respectively, Topeka, Kan. Also 3rd Annual Fire College and 6th Annual Convention, Women's Auxiliary. Secretary, Chief K. D. Doyle, Wamego, Tex. Chairman, Fire School Committee, E. J. Stewart.

June 9-10—MINNESOTA STATE FIRE DEPARTMENT ASSOCIATION. 59th Annual Convention, Owatonna, Minn., also, June 8 Annual Convention, the Minnesota Volunteer Firemen's Benefit Association, same place. Secretary, Fred Pfaender, New Ulm, Minn.

June 9-11—TEXAS STATE FIREMEN'S ASSOCIATION. 55th Annual Convention, Bryan, Tex. Secretary, Olin Culberson, Edna, Tex.

June 9-12—OHIO FIRE CHIEFS' ASSOCIATION. 14th Annual Convention, Akron, Ohio. Secretary, Chief Philip J. Harty, Youngstown Sheet & Tube Company, Youngstown, Ohio.

June 10-12—FLORIDA FIRE COLLEGE. 2nd Florida Fire College, Sebring, Fla. Address, Florida State Firemen's Association Fire College Committee, Chief Anderson, Ft. Myers, Fla., Chairman.

June 11-13—ARIZONA STATE FIREMEN'S ASSOCIATION. 8th Annual Convention, Flagstaff, Ariz. Secretary-Treasurer, H. W. Reggin, P. O. Box 813, Prescott, Ariz.

June 11-13—DELAWARE COUNTY FIREMEN'S ASSOCIATION. 25th Annual Convention, and Parade, Upper Darby, Pa. Financial Secretary, William E. Wunderlich, Lansdowne, Pa.

June 16-18—HUDSON VALLEY VOLUNTEER FIREMEN'S ASSOCIATION. 42nd Annual Convention, Schuylerville, N. Y. Secretary, Chief Chris W. Noll, Poughkeepsie, N. Y.

June 17—NORTHWESTERN OHIO VOLUNTEER FIREMEN'S ASSOCIATION. 59th Annual Convention, Port Clinton, Ohio. General Chairman of Convention, Harry Smith, Supt. Water Works, Port Clinton.

June 17-18—MARITIME FIRE CHIEFS' ASSOCIATION. 16th Annual Convention. Secretary, Capt. K. J. MacRae, St. John, N. B.

June 17-20—WASHINGTON STATE FIREMEN'S ASSOCIATION 9th Annual Convention, Port Angeles, Wash. Secretary, S. H. Jenkins, Bellingham, Wash.

June 19-20—EASTERN ASSOCIATION OF FIRE CHIEFS. 4th Annual Convention, Madison Hotel, Atlantic City, N. J. Secretary, Ex-Chief F. E. Soulé, Coatesville, Pa.

June 23-26—NEW ENGLAND ASSOCIATION OF FIRE CHIEFS. 9th Annual Convention, Copley-Plaza Hotel, Boston, Mass. Meetings, Paul Revere Hall, Mechanics' Bldg., Huntington Ave., and Exhibits, Grand Hall, Same Bldg. Secretary, Chief John W. O'Hearn, 99 Main St., Watertown, Mass.; Chairman Exhibits, Chief Daniel B. Tierney, Arlington, Mass.; Traffic Manager, George F. Cobb, 744 Albany St., Boston.

June 24—NASSAU COUNTY FIREMEN'S ASSOCIATION. 26th Anniversary Parade and Tournament, Great Neck, L. I., N. Y. Secretary, J. W. Lane. Chairman, Tournament Committee, Chief Henry N. Buck, Westbury, N. Y.

July 8-9—DELAWARE VOLUNTEER FIREMEN'S ASSOCIATION. 11th Annual Convention, and Parade, Dover Del. Secretary, Sam H. Carson, Dover, Del.

July 13-16—MICHIGAN STATE FIREMEN'S ASSOCIATION. 57th Annual Convention, and 3rd Annual Fire College. Secretary-Treasurer, H. L. Williams, Luddington, Mich.

July 13-16—MONTANA STATE FIREMEN'S ASSOCIATION. 40th Annual Convention, and Firemen's Short Course, Bozeman, Mont. Secretary-Treasurer, D. E. Moser, Bozeman.

July 22-23—CENTRAL NEW YORK FIREMEN'S ASSOCIATION. 38th Annual Convention, Endicott, N. Y. Secretary, T. J. Murray, Cortland, N. Y.

July 31-Aug. 3—ONTARIO VOLUNTEER FIREMEN'S ASSOCIATION. Annual Convention, Dundas, Ont., Can. Secretary, W. J. Armstrong, 282 Indian Grove Ave., Toronto, 9, Ont.

Aug. 4-6—WISCONSIN PAID FIREMEN'S ASSOCIATION. 24th Annual Convention, Oconto, Wis., Secretary-Treasurer, William Schultz, Sheboygan, Wis

Aug. 4-7—DOMINION ASSOCIATION OF FIRE CHIEFS. 23rd Annual Convention, Shawinigan Falls, P. Q., Can. Secretary, Chief James Armstrong, Kingston, Ont., Can. Exhibits, Chief R. N. O. Harrington, 4,000 Marlowe Ave., Notre Dame de Grace, Montreal.

Aug. 5-7—CALIFORNIA STATE FIREMEN'S ASSOCIATION. 9th Annual Convention, Santa Rosa, Cal. Secretary-Treasurer, H. E. Strasser, 1171 Tenth St., San Diego, Cal. Chairman, Convention Committee, Chief William H. Muenter, Santa Rosa, Cal.

Aug. 11-13—INDIANA FIREMEN'S ASSOCIATION. 14th Annual Convention, Evansville, Ind. Secretary, Clem Smith, P. O. Box 520, Terre Haute, Ind.

Aug. 18-21—FIREMEN'S ASSOCIATON OF THE STATE OF NEW YORK. 59th Annual Convention, place of meeting to be decided later. Secretary, Fred A. Davis, Fort Edward, N. Y.

Sept. 1-3—KENTUCKY FIREMEN'S ASSOCIATION. 12th Annual Convention, Louisville, Ky. Secretary, Captain S. G. Render, Fire Department, Louisville, Ky.

Sept. 3-4—WISCONSIN STATE FIRE CHIEFS' ASSOCIATION. 2nd Annual Convention, Portage, Wis. Secretary, Chief A. J. Rahn, Two Rivers, Wis.

Sept. 8-10—ILLINOIS FIREMEN'S ASSOCIATION. 44th Annual Convention, Murphysboro, Ill. Secretary, Assistant Chief Roy W. Alsip, Champaign, Ill. Exhibit information, Chief Albert Herring, Murphysboro. Also, 1st Annual Convention, Ladies' Auxiliary of Illinois Firemen's Association. Secretary, Mrs. R. W. Alsip, Champaign.

Sept. 15-16—IOWA FIREMEN'S ASSOCIATION and IOWA FIREMEN'S FUNERAL AID ASSOCIATION. 54th Annual Convention, Audubon, Ia. Secretary, Paul A. Soener, Independence, Ia.

Sept. 19-22—PACIFIC COAST ASSOCIATION OF FIRE CHIEFS. 38th Annual Convention, Royal Hawaiian Hotel, Honolulu, T. H. Secretary, Jay W. Stevens, 1014 Marchants Exchange Bldg., San Francisco, Cal.

Sept. 22-24—MASSACHUSETTS STATE FIREMEN'S ASSOCIATION. 52nd Annual Convention, Lynn, Mass. (Sessions at New Ocean House, Swampscott). Secretary, Daniel J. Looney, Room 1043, Old South Bldg., Boston, Mass.

Oct. 6-8—FIREMEN'S ASSOCIATION OF THE STATE OF PENNSYLVANIA. 52nd Annual Convention, Wilkes-Barre, Pa. Secretary, Charles E. Clark, 411 Bellevue Ave., Wayne, Pa.

Oct. 14-17—INTERNATIONAL ASSOCIATION OF FIRE CHIEFS. 59th Annual Convention, Plaza Hotel, Havana, Cuba. Meeting Hall, Asturiano Club. Recording Secretary, Chief James J. Mulcahey, Yonkers, N. Y.: Executive Secretary, Jay W. Stevens, 1014 Merchants' Exchange Bldg., San Francisco, Cal.; Chairman, Exhibit Committee, Chief Charles A. McGinley, East Orange, N. J.

Oct. 20-22—NEBRASKA STATE VOLUNTEER FIREMEN'S ASSOCIATION. 50th Annual Convention, Norfolk, Neb. Secretary-Treasurer, H. A. Webbert, Kearney, Neb.

Oct. 20-22—RAILWAY FIRE PROTECTION ASSOCIATION. 18th Annual Meeting, Cleveland, Ohio. Secretary-Treasurer, R. R. Hackett, Baltimore & Ohio Railroad, Baltimore, Md.

Pumper Delivered to Lynn, Mass.—A new pumper has been delivered to Lynn, Mass.

Provincetown, Mass., Orders Pumper—Provincetown, Mass., has placed an order for a 500-gallon pumper.

Wellsville, N. Y., to Receive Apparatus—Buffalo fire apparatus is to be delivered to Wellsville, N. Y., about May 1. It will carry three booster tanks each of 100-gallon capacity.

New Cooling System for Pumpers—Two fire department pumpers equipped with the Foutz cooling system were successfully tested. The system is the invention of Clinton R. Foutz of Baltimore, Md. It is claimed that with this device, jacket temperatures 100° higher than ordinary temperatures are possible and there is a reduction of crank case dilution. Two pumpers and a tractor aerial so equipped were delivered to Washington, D. C.

METHODS TO BE EMPLOYED IN SALVAGE OPERATIONS AT FIRES

Lessons Giving Instructions as to Methods Considered Good Practice in This Work—Best Arrangement of Goods for Salvage Purposes

The following instructive symposium on salvage operations at fires has been furnished through the courtesy of Chief Edward H. Warr, of the Baltimore, Md., Fire Insurance Salvage Corps. It comprises Lessons No. 21 and 21A of the Salvage Corps' School of Instruction. This lesson was attended by practical demonstrations given by the members of the Salvage Corps under the direction of Chief Warr. Conclusion of Salvage Work and Temporary Repairs:

(Concluded from last issue)

SALVAGING at fires means to protect the contents of a building from the effects of water on various stocks, house-furnishings, etc. Special attention should be given at fires to the valuable stock; fixtures, appliances and machinery which are in danger of being damaged, such as linotype machines, stereotype machines, printing presses, typewriters, adding machines, duplicating machines, electrical switchboards, motors, cutting and packing machinery, cotton pickers, loom machines and many other valuable pieces of machinery that are too numerous to mention here. These should be covered with salvage covers, as they are easily damaged by water and if found to be damp or wet should be wiped off and oiled as soon as possible to prevent rust. In mercantile establishments a great amount of damage can be done to silks, embroideries, linens and cotton goods, and the damage to this sort of stock is often very heavy from smoke and water, particularly colored materials. Silks become rough and hard to work if wet and thrown around, and must be protected with salvage covers.

Every Chief and fireman should realize that performing salvage work at fires is just as an important part of their duty as extinguishing the fire. Salvage work, when properly and efficiently performed, materially increases the efficiency of a fire department, and will materially aid in decreasing the fire losses.

Every Chief should lose no time in learning the scientific and systematic methods of performing salvage operations, and see that every member of his department or company does likewise. Fire chiefs and company commanders should bear in mind at all times that the men who are specially trained and detailed to perform salvage work should not be taken from that duty to assist in pulling in lines of hose, tearing down ceilings, overhauling, etc. They should exercise every effort to eliminate as much as possible, the unnecessary use of water to extinguish a fire.

Removing Contents from Rural Buildings

In the rural districts it frequently becomes necessary to remove the contents of a building which is in danger of being burned to the ground; this can be very successfully accomplished by spreading a cover or covers on the ground, placing the contents removed from the building on these covers. After everything has been successfully removed from the building, other covers should be spread over the top of the contents, covering every article thoroughly and tucking the ends of the covers on the ground up underneath the covers which have been spread over the top of the contents; then carefully guarding the goods until they can be placed back into the building or some other suitable location.

If in the judgment of the Chief or the company commander it is not necessary to remove the stock and furniture from a burning building it should be thoroughly covered with salvage covers inside the building, starting first on the floor directly beneath the fire. There are times when circumstances will permit covering the stock and furniture in the same room where the fire originated; however, when doing this, you must carefully guard against covering any article that may have been touched by fire. In conjunction with being an efficient officer, the Chief or company commander should have a knowledge of insurance adjusting. He can accomplish this to a great extent by familiarizing himself with Reed's "Adjustment of Fire Losses," which will give him a first-hand knowledge along this branch or work. He also should be thoroughly familiar with the ability and methods of the Fire Department extinguishing the fire; always keep a correct record of each and every fire, the insured and uninsured loss and endeavor to learn how to investigate fires of a suspicious character.

No fire company of today is considered completely equipped for fire service unless it has among its equipment the necessary tools to perform salvage operations. These tools consist of at least ten 14' x 18' salvage covers, which is rapidly becoming the standard size; a roll of tar paper of the cheapest grade manufactured; one 2-bushel bag of sawdust; one life belt and line to be used on steep roofs; one belt, hatchet and nail pouch for each member; brooms; buckets, sponges; scoop-shovels or squeegees. The care of salvage covers should be given the same consideration as fire hose, and after having been used at a fire should be thoroughly scrubbed, cleaned and hung up to dry, after which they should be folded up and placed back in service.

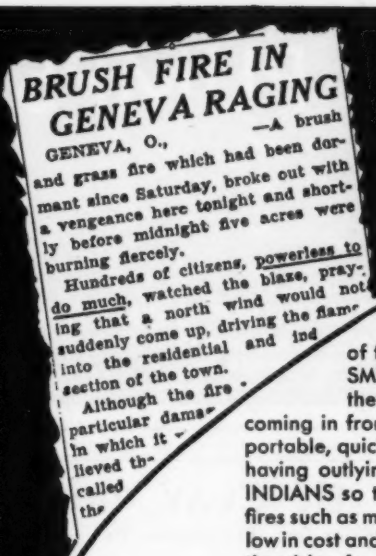
To Guard Against Unauthorized Persons Entering

It very frequently happens at fires that various persons take advantage of the opportunity to enter the premises for the sole purpose of ransacking and taking whatever valuables that may be in sight, knowing that the blame for the loss of same will be placed on the members of the fire company. To guard against such occurences, no one should be allowed to enter the premises except the firemen while the fire is being extinguished. After the fire is extinguished every effort should be made to locate the rightful occupant or owner and the building and any valuables that may have been found should be turned over to them; keeping out all other persons not having business or authority to enter the premises. There are times however when the occupant or owner is out of town, and to protect the interest of these parties a reliable and competent man should be left on watch until they, or some other responsible person, assumes charge of the premises, and to guard against anything being removed from the premises illegally.

A great many times while overhauling at a fire, valuables will become mixed with the debris and thrown into the yard or street; on such occasions the men performing salvage operations should thoroughly overhaul this debris and place anything of value back into the building.

If there is any covering to be done on the inside an efficient procedure is as follows: Move the contents quickly to the center of the room and cover with as many salvage covers as may be necessary; if the contents are extremely valuable it is wise to double the amount of covers required, to protect them against falling ceilings, water, debris, etc. When it becomes necessary to use large streams of water to extinguish the fire it is wise to bag covers on the floor directly beneath the fire. When properly bagged a cover will hold from six inches to a foot of water. There might however be only a small amount of water, in which case the cover is spread on the floor and the edges merely turned up and over and when properly done this cover will hold from three to four inches of water. It might be possible to nail the cover under the ceiling. This is done by nailing one edge of the cover to the side wall close to the ceiling and arranging the other end so that the water will run through an open window to the outside of the building. This work of bagging covers has its many advantages, and it is almost impossible to estimate the value derived from carrying the necessary tools on the apparatus to perform effective salvage operations.

A hole ranging up to six feet square in a slant roof or peak roof can be temporarily repaired to protect the interior and the contents of the building against bad weather by first nailing some boards or strips to the joists or studding, making a temporary sheathing job, cut off a piece of tarpaper a little larger than the hole and stretch the same lengthwise across the hole, starting at the eaves. It may be necessary to use more than one piece; if so, use as much as is required to cover the hole, lapping each piece at least six inches over the other. When the hole is covered, nail strips or laths around the edges of the tarpaper. This makes a very effective temporary repair job. There are times however, when it becomes necessary to tear half the roof off; in cases of this kind it is necessary to use a cover on the roof, fastening the same over the peak by nailing strips along the edge of the cover, making sure that the nails go through the grommets in the cover, always being careful never to drive a nail through the cover proper. When covering a hole in a flat roof, the usual procedure is as follows:—cut the roofing material off square and raise it from the sheathing, spreading the cover so that it will hang down over the edge of the roof. When nail holes are in the roof, they can be very effectively repaired by placing a piece of tarpaper between the roofing material and the sheathing at the highest end of the damaged part of the roof, then running it on top of the roofing material at the lowest end of


BRUSH FIRE IN GENEVA RAGING

GENEVA, O., —A brush and grass fire which had been dormant since Saturday, broke out with a vengeance here tonight and shortly before midnight five acres were burning fiercely.

Hundreds of citizens, powerless to do much, watched the blaze, praying that a north wind would not suddenly come up, driving the flames into the residential and ind section of the town.

Although the fire particular dama in which it lieved th called the

"—powerless to do much"

FIRE CHIEFS who have experimented with every method of fighting brush and grass fires say the SMITH INDIAN is the finest extinguisher they ever used. More and more orders are coming in from rural and city departments for these portable, quick action fire pumps. Fire wardens are having outlying towns and villages equipped with INDIANS so that volunteers can quickly extinguish fires such as mentioned in the clipping. The INDIAN is low in cost and uses only clear water. It is the ideal extinguisher for rubbish, awning, roof or spot fires, too.

—AGENTS WANTED—

The INDIAN in Action (Patented)

WRITE for FOLDER!

D. B. SMITH & COMPANY
417 Main Street, Utica, N. Y.
Pacific Coast Agents
Fire Prot. Eng. Co., 369 Pine Street, San Francisco, Calif.

The Smith INDIAN Fire Pump

Fire Apparatus
Fire Department Ladders
Fire Fighting Appliances

Dependable Fire Ladders, Life Belts, Door Openers, Battering Rams, Fire Hooks, Pike Poles, Roof Cutters, etc.

Write us when interested.

COMBINATION LADDER CO., INC.
381 Fountain Street Providence, R. I.

MAXIM FIRE APPARATUS

All Types

All Sizes

If you are thinking of buying new apparatus shortly, be sure to get all the facts about MAXIM before you decide.
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MAXIM MOTOR COMPANY, Middleboro, Mass.
Metropolitan Sales Agents:
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Specializing in badges and insignia equipment for every fire department need, the EVERSON-ROSS line, known for its fine quality of materials and workmanship, offers a large, up-to-date selection to suit the most discriminating taste. Before you buy—

Write for our Fire Department Badge Catalog No. 32.

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New Victor Gas and Fume Mask

Better Rubber. Longer Life. Better Fitted. Moulded to Fit the Face. Better Vision. Renewable Lenses. Better Air. Better Work. Low Prices. High Quality.

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NORTHERN PUMP COMPANY

MINNEAPOLIS, MINNESOTA, U. S. A.

ESTABLISHED 1907

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Durable, Heat Treated, All Metal

FIRE BROOM

You've Never Used Anything Like It

Here is a Fire Broom that firemen everywhere have been waiting for. Entirely constructed of special heat treated steel, its strong spring steel bristles will not curl when exposed to heat and flame. Anyone can use it effectively for preventing spread of grass or brush fires. Specify FELCO Brooms on all new apparatus, they are an absolute necessity.

If your supply house does not carry them, write us direct.

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JOHN H. CLAY, INC.

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Established 1864

DOOR SPRINGS

Complete Automatic Spring Outfits for Doors Opening In and Out. Used throughout the world. Once on the doors your door opening troubles cease. They last a lifetime. Send for Bulletins.

Comfort and Protection With

CAIRNS CUSHION LINED HELMETS

Comfortable as your old felt hat.
Won't shake off.
Never go to a fire without the protection of a good helmet.

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Standard Over Fifty Years

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G

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TROY, NEW YORK.

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Are given preference by so many fire protection and water works men because they know that more than half a century of experience go into their manufacture and they embody valuable and exclusive features.

Write for the Facts

EDDY VALVE CO.

Waterford, N. Y.

James B. Clow & Sons, Chicago Agents

the damaged part. Strips of wood or laths, or whatever is most convenient should be tacked along the edge and around all the sides. In cases where the entire roof is off, it then becomes necessary to make a skeleton work whereby roof covers can be spread over same, preventing further damage by rain or inclement weather.

Temporary repairs to windows in dwellings, and in a great many mercantile and manufacturing establishments, can be made by placing one strip of tarpaper over the window and nailing strips across the backs of same from frame to frame on the inside of the building, to keep the wind from blowing it loose.

As to elevator shafts, a rough railing made of old boards or anything that can be had at the time can be placed around the opening. The same also applies when entire skylights have been torn away, in which case the rail is set around the hole and a cover spread over the same. When there are small holes in a skylight, a piece of tarpaper will do.

In cases where the stairway leading from the upper to the lower floors has been burned away, these openings should be protected by nailing boards across the entrance to same. As a rule, the first floor doors are rarely ever burned completely away, but they are often torn from their hinges; in such cases the doors should be placed back into position and supported with boards nailed across the back of the door, from frame to frame, on the inside of the building.

Small holes in the floor can be protected by moving a piece of furniture over the same. In cases where the hole cannot be covered, a light should be left burning near it, and all persons entering should be warned of same by the man left on watch.

After the fire has been extinguished it becomes necessary to show how effectively your salvage operations have been performed; every effort should be made to clean up the premises and leave them in as good a condition as circumstances will permit. First sweep all fallen plaster, laths and other debris into a pile and remove same from the premises in anything that may be handy, such as boxes, cans, etc. After all water and debris have been removed from the floors, sawdust should be spread all over the same, to absorb all loose water and dampness. After this has been absorbed, the sawdust should be swept up and removed from the building. If there still happens to be a little water dripping from the ceiling some sawdust should be left lying on the floor under the drip to take care of same.

The covers that have been spread over the contents should be taken up and removed from the premises, that is, of course, if there is no water dripping. After the premises have been cleaned up as much as possible it is the duty then of the salvage department to arrange the furniture, stock, etc., in as neat and tidy condition as circumstances will permit. Any machinery which has become wet must be immediately wiped off and oiled to prevent it from becoming rusty.

All damaged stock or material which has been removed from the building should be brought back and placed into a neat pile within the building, after making sure that there is no fire in the same. When a large amount of water has been used to extinguish the fire, especially when the fire originated in the cellar, it is the duty of the salvage department to remove the same as soon as possible, that is, of course, if the cellar is not equipped with drains.

1981 Firemen May Have Easy Life

Firemen of fifty or one hundred years hence are going to lead a pretty drab existence, if the prediction of Chief John C. Moran, of the Hartford, Conn., Fire Department, who has just completed forty-five years as a smoke-eater, is correct.

In his opinion there will be no more shiny apparatus with miles of hose and wailing sirens, no thrilling rescues from burning buildings, no sliding half-dressed down a brass rail on a cold winter's morning for a high-speed race to the blaze.

Here is Chief Moran's conception of a typical fire of the future:

When fire will break out in an office building in which hundreds of persons are working, huge fire doors, operated mechanically, will close off the room in which the blaze is located while smothering gases are released from sprinkler devices. The fire will be extinguished before it has a chance to gain headway. Building occupants, secure in the knowledge that the structure is completely fireproof, will continue their work. There will be firemen, but they will be "white collar" workers who will arrive leisurely after the fire is over to check up loss and report to headquarters.

Chief Moran believes municipal regulations will force incorporation of safety devices against fire in all buildings.

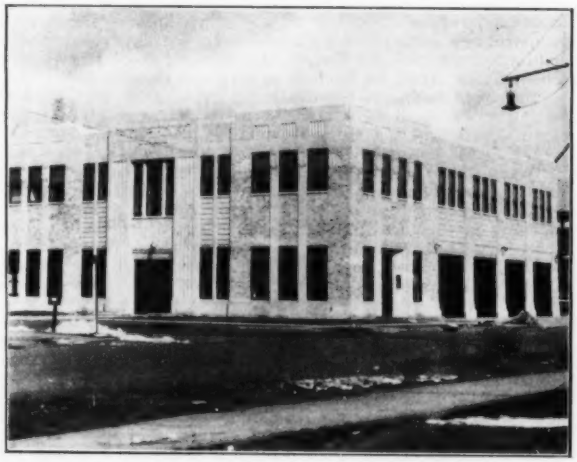
THOMAS F. MAGNER.

Two New Wichita Fire Stations

(*Continued from page 272*)

size. The city is rated as third class, and the department has a second class rating on the old station. It has not yet been re-rated with the new stations and equipment. The fire loss has been extremely low for the past number of years averaging $284,750, per year for the last five years. The last two years, however, have been lower than ever before. 1930 had a loss of $75,474, and so far this year the loss is around $9,000. One reason for this low loss is the fact fire prevention has been made a big factor and stressed throughout the city very extensively, especially in the schools. Wichita tied for first place in last year's National Fire Prevention Campaign. The department also employs two men for inspection work only, and these men save the city thousands of dollars yearly by discovering hazards and having them removed.

It has been due to the untiring efforts of Chief H. H. McCall and Assistant Chief P. M. Wendel, that the



Station No. 2 of the Wichita, Kan., Fire Department

department is what it is today. And it is the result of these two men's work that has brought the two new stations into a reality and has made them of the finest and most efficient in the country.

Women Smokers More Dangerous

The Boston *Daily Record*, in a recent editorial on women smokers commented on the dangerous habits of feminine butt throwers and quoted Chief Henry A. Fox, of the Boston Fire Department as follows:

"Women smokers are worse than men in their careless handling of lighted cigarettes, for, in places where smoking is forbidden, women will steal a smoke and throw butts away which prove dangerous. The taking down of 'Smoking Forbidden' signs in many restaurants and other public places was partly due to this cause. The proprietors discovered that many women would disregard the notices more flagrantly than the men patrons and in ways that were fraught with danger to the establishment."

The editorial also said:

"Chief Fox is a gallant gentleman, but when he discusses women smokers and their disposal of lighted cigarette butts, he talks right out in meeting. It had not occurred to us that women are more careless than men in leaving lighted butts where they will start fires. But if Chief Fox says so, we believe it. Knowledge of fire causes is part of his job. Therefore, ladies, please be careful with your live cigarette butts. Any fire—in the fire department meaning of the word—is bad and some are worse."

HARRY BELKNAP.

Easton, Mass., to Buy Fire Apparatus—Easton, Mass., has voted to spend $15,000 for fire apparatus.

FIRE PREVENTION ORDINANCE FOR CITIES AND TOWNS

It Establishes Bureau of Fire Prevention—Prescribes Regulations for Hazardous Materials and Processes

(Continued from last issue)

THE following Fire Prevention Ordinance has been prepared by Engineers of the National Board of Fire Underwriters and is recommended by that organization for adoption by cities and towns. While it is not expected that in all cases smaller cities will find need for an ordinance of such length, it is recommended by the Board that a complete set of regulations be adopted in all cases, for even though there may be no immediate need of regulation of a particular hazard, every growing community is sure to have these hazards introduced sooner or later, and it is better to be prepared for them than to develop unrestricted and then try to regulate them. The ordinance is being published in its entirety serially in FIRE ENGINEERING. *Continuation of Part 17, Automobile Garages and Automobile Repair Shops—Class B, Public Garages:*

Type 3.—Construction of this type is defined as that having enclosing walls of masonry, concrete or reinforced concrete, and with wooden roof supported on timber trusses or columns; supports shall be of mill type, or of built-up truss construction with no wooden members less than 2 inches in minimum dimension. Unsprinklered garages of this type of construction shall be limited to one story in height.

The area between fire walls in garages of this type of construction shall be restricted to 6,000 square feet, if unsprinklered, and 12,000 square feet if sprinklered.

1710. All elevators, stairways or other vertical openings between floors shall be enclosed by walls constructed of material classified not less than 2 hours when tested as prescribed by the Standard Fire Test Specifications. Every opening in such elevator, stairway or enclosure shall be protected by an automatic fire door approved for this purpose.

1711. Where ramps are employed they shall be continuously enclosed or of a type which will provide a suitable cut-off at each floor level.

1712. A public garage may be located beneath other occupancies provided the following requirements are complied with:

(a) Garage section shall be separated by unpierced fire walls or floor of four hours fire resistance from any upper portion of the building used for offices, living quarters, stores, theatres, manufacturing or other occupancies involving the presence of 10 or more people; provided that this will not prohibit the use of elevators and stairs to upper floors where entrance is from a vestibule or balcony open to the air on one side and with approved normally closed fire door to the garage section and to each upper story.

(b) Any garage section having a capacity of 20 or more passenger automobiles, or used as a bus terminal with a capacity exceeding two buses, or used for the storage or loading of two or more trucks shall be equipped with an approved automatic sprinkler system.

(c) Any garage section with floor level below street grade at entrance doorway shall have a ventilating and exhaust system so designed as to assure suitable dilution and removal of gasoline vapors and motor exhaust fumes. In general such a system shall assure complete change of air every three minutes, shall be continuously operated, with suitable reserve equipment, and shall be provided with a trouble bell, arranged to operate continually in case of shut down of the system.

1713. Repair work shall be defined as carbon and lead burning, welding or any other process involving open flame or spark emitting devices, or the use of machine tools.

1714. No repair work shall be done below street grade.

1715. Any garage in which repair work is carried on and which will accommodate more than twenty cars on any floor shall be equipped with an automatic sprinkler system, unless all carbon and lead burning, welding and other processes involving direct application of flame, are carried on in the open air not less than 10 feet from any building or in a room or compartment enclosed by walls having a fire resistance of not less than 2 hours when classified in accordance with the standard fire test specifications. Every opening in such enclosing walls shall be protected by fire doors or windows approved for this purpose; no opening to any upper floor shall be permitted.

1716. The use of any flammable liquid for washing parts or removing dirt or grease is prohibited in every garage or repair shop, except where carried on in a special closed machine approved for that purpose or in a special cut-off room or compartment.

1717. All gasoline exclusive of that in the tanks of vehicles shall be stored in underground tanks, provided however, that there may be in each garage one or more approved portable wheeled tanks, each of a capacity not exceeding sixty gallons, to be used for transferring such liquid from the storage tank; the number of these wheeled tanks shall be fixed for each garage by the Chief of the Bureau of Fire Prevention. The reservoirs of motor vehicles shall be filled directly through hose from pumps attached to such portable tanks, or by hose coupled to permanent filling stations connected with the main storage tanks. No transfer of gasoline in any garage shall be made in any open container. Hose for use in connection with the filling station or with the portable tank shall be of such design and material as to prevent leakage.

1718. There shall be no smoking in any public garage and suitable "NO SMOKING" signs shall be displayed.

1719. In no instance shall gasoline or other volatile or flammable liquid be allowed to run upon the floor or to fall or pass into the drainage system of the premises. Self-closing metal cans shall be used for all oily waste or wasted oils.

1720. In every public garage two or more approved chemical fire extinguishers and four or more pails of sand shall be kept convenient for quick use in case of fire.

1721. Heating plants if located in any public garage shall be cut off from all other parts of the building by construction equivalent to 6 inches of reinforced concrete or 8 inches of brick and without openings other than required for heating pipes and ducts.

1722. All public garages shall be swept frequently and be kept clean.

Part 18—Fire Exits

1801. No person shall at any time place an encumbrance of any kind whatsoever before or upon any fire escape, balcony or ladder intended as a means of escape from fire. It shall be the duty of every member of the police and fire departments who shall discover any fire escapes encumbered in any manner to forthwith report to the Bureau of Fire Prevention and the said Bureau shall immediately notify the owner and the tenant to remove such encumbrance.

1802. It shall be unlawful for any person to place, store or keep, or permit to be placed, stored or kept under or at the bottom of any stairway, inside or outside, elevator or other shaft in any building, any combustible or flammable materials, fluids or compounds, nor shall any such combustible or flammable materials be placed or stored or kept in any place where ignition or burning would obstruct or render hazardous, egress from a building.

(To be continued)

Origin of "Vamp" and "Buff"

Every once in a while the question is asked as to where the words "vamp" and "buff" come from.

Funk & Wagnall's dictionary gives "vamp" as "American slang for volunteer fireman." No doubt, to vamp, to keep time, to beat, had something to do with it, since the volunteers who used to run with the hand pumps, must of necessity have had to run in unison. We have asked everybody, but none seems to enlighten us further. Perhaps "vamp" is just an abbreviation for the longer word "volunteer"?

At all events, it fits the head-lines better and gives the copy readers less trouble.

Now as to "buff"—that is right in my ken. Buff is an abbreviation for buffalo. Before my day the civilians who did not officially belong to the fire company, but who made the engine house a hang-out or rendezvous during spare time, and who by the same token liked to do chores for the firemen, wore buffalo skin robes, much like the collegians of today wear raccoon coats.

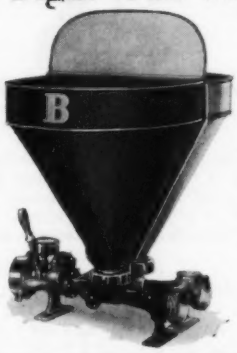
These civilian-firemen invariably were business men or others who by reason of their employment were not accessible to the fire house. Consequently they spent their off or spare time around the fire house and being possessed of sufficient of the world's goods to sport a buffalo skin coat, the fire fighters of that day used to refer to them or call them "Buffaloes." It was from that expression that "Buff" came as an abbreviation.

In Chicago a fire department enthusiast is called a "fire fan" and in Boston he is referred to as a "spark."

I will not report here what my wife calls me now and then for this fire fighting hobby of mine. However, it's more romantic than golf.

WM. JEROME DALY.

Fight OIL Fires with FOAM



The increasing number of oil hazards in every city has made continuous Foam Ejectors and Chemicals standard equipment with all up-to-date Fire Departments.

NATIONAL Type 6 Ejector weighs only 37 lbs., but will produce 600 to 800 gallons of foam per minute. Other models up to 3,000 gallons capacity.

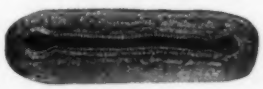
NATIONAL FOAM SYSTEM, INC.

Philadelphia
New York Chicago Tulsa

BI-LATERAL FIRE HOSE

THE BI-LATERAL FIRE HOSE CO.

29 North Wacker Drive
(Civic Opera Building)
Chicago, Ill.



It is easy to explain why Bi-Lateral Fire Hose is the only successful improvement made in the construction of hose which permits it to be flattened on the modern apparatus without causing rapid aging of the rubber at the points of fold.

Send for descriptive matter.

Novo Acid Jars & Holders

of every description stronger than lead and non-corrosive. Used by departments throughout the country.

Chemical Tanks and Lally Quick Opening and Self-packing Top for Chemical Tanks

Lally Improved Fire Hose Couplings, Fire Extinguishers and Charges, Fire Hose and Fire Department Supplies in General

Send for Complete Catalog

LALLY FIRE APPLIANCE CO.

Wilmington Brass Co., Wilmington, Del.

Baker Fabric

Wound with a woven-in strand which runs back and forth from rubber lining to outer surface. This yields a pliability which prevents all buckling at the folds. Write for details.

MANUFACTURED EXCLUSIVELY BY

HEWITT - GUTTA PERCHA RUBBER CORPORATION

BUFFALO, N. Y.
(Also makers of single and double jacket hose)

"Territories Available"

Are You Looking for a Position—

Do You Need Any Help—

Have You Some Used Equipment For Sale—

Are You Calling for Bids for New Equipment—

The most effective and economical way of making your wants known is through a small classified advertisement in FIRE ENGINEERING, the magazine everybody in the fire field reads. The "Position Wanted" rate is only $2 per inch (single column); all others $4.

FIRE ENGINEERING

24 West 40th Street
New York City

FALSE ALARMS

NEVER ALONE

After Murphy's death, his friend O'Brien received permission from the Chief to appear as a witness in his late friend's will litigation.

"Was the deceased in the habit of talking to himself when he was alone?" asked the lawyer.

"I don't know," said O'Brien.

"Come, come, you don't know, and yet you were intimately acquainted with him."

"Yes," replied the witness slowly, "that's so, but you see I never happened to be with him when he was alone."

And the man who first called stocks and bonds "Securities" had a keen sense of humor.

THEY CALL

Because of the depression, he resolved to sell fire and other forms of insurance. One of the older agents was instructing the new salesman. The new recruit became discouraged.

"I can't sell fire insurance. How do you know they want any?"

"Oh, you give 'em a red card to hang out on the porch," replied the veteran with a grin.

And there is no simile more expressive than "melted away like taxies in a rainstorm."

COSTLY JOKE

A comedian appearing in a Pennsylvania theatre was fined fifty dollars by a local magistrate for the following line in his act:

"Why does a fireman wear red suspenders?"

The answer is, "To keep his pants up."

The Magistrate said that the comedian violated a local ordinance which prohibited holding up the local fire department to ridicule. He should have been fined for unearthing a joke that had outlived its age.

Said the toastmaster to the next speaker, "Shall I call on you, William, or shall I let them enjoy themselves awhile?"

JUST AFRAID

The alderman, when he saw the ward boss, asked:

"I understand that your friend is still out of a job. Why doesn't he apply to the Fire Department, like I told you?"

"He is afraid of not getting it. And if he didn't, the disappointment would be too great."

Sign on a garage: Cars washed 50c —Austins dunked 25c.

NOT APPRECIATED

A welfare worker, fat and forty, and radiating the message that all was well with the world, visited the county jail. She said to one of the long term guests:

"I know you are not entirely bad, because I've been told you helped take all the prizes at your local fire tournament."

"Of course, I did lady. That's what I'm here for."

Marriage brings a lot of change into a man's life—and it also takes a lot out, too.

ROPED ONCE

The sales manager called to one of his men:

"I want you to prove your power as a salesman. Just take a trip over to Chief Myers and sell him some of the powder extinguishers.

"But I sold him some of them two months ago."

"I know," said the sales manager, "but selling them to him again is where the real test is going to come in."

The world trusts a man who admits he likes onions.

THE MARK

Up at the repair shop, one of the boys was reading a new book on the automobile engine. Came noon hour and he reached for the book.

"I've forgotten how far I've read in this book," he said to his buddy.

"That's easy. Just look for the place where the clean pages start."

"It is very hard to drive a bargain," said the fellow who had bought an old Ford for ten dollars.

TOLD THE TRUTH

The Fire Department was making its annual house inspection. In front of one house the man saw a small boy with a wagon.

"Is your mother at home?" asked the inspector.

"Yes, sir," said the youngster politely.

He went up to the house, but after knocking a number of times failed to get a response. He walked over to the boy.

"I thought that you said your mother was at home."

"Yes, she is, sir, but I don't live here."

The only person we know who makes a success running other people down is the elevator boy.

PROTECTED

An inspector asked a conservative merchant if he carried fire insurance.

"Certainly," said the merchant. "I've got the best policy in the world. I've had it twenty years and never had a fire."

And there was the young man who called on the school teacher and had to stay an extra hour for being naughty.

OLD NUMBER

Up at the Bureau of Supplies, one of the officials took the receiver and started to make a call, but before he had a chance to speak he forgot the number. He shouted to a clerk:

"Hey there, what's the number of Jerry Smith? It's right up there on top of their bill."

"Here it is sir," said the clerk, "Established one-eight-seven-three."

In the spring a young man's fancy turns land him in the traffic court.

FOLLOWED RULES

A cub reporter was given thorough and emphatic instructions by the city editor never to use two words when one would do. When the cub was sent to report on an explosion and fire in a private garage, the reporter returned to the office and wrote:

"Robert Smith struck a match to see if there was any gasoline in the tank. There was. Age 65."

"Have yuh got a match?"

"Have I? Say, I've got matches to burn."

—*Drawing by "Art" Espey*

Hot House Methods Are Not Desired in the Home

A very thoughtful person took the battery out of his car and stored it for the winter under his bed. The battery had a very good charge, even though it was put aside. When the thoughtful motorist climbed into bed, the wire spring sagged because of his weight, and came in contact with the battery. Sparks resulted and the mattress was set afire. In hot houses, heat is used to force things up. The same plan worked here, even though it was not desired. The flames were quickly extinguished.

YOUR CATALOG PAGE

Fire Protection Equipment and Supplies

1 Acid Siphons.
2 Adaptors for Changing Hydrant Threads.
3 Acid Jars and Rings.
4 Aerial Ladders, Detachable.
5 Aerial Trucks.
6 Alarms, Siren, Electric.
7 Alarm Systems, Industrial.
8 Alarm Systems, Municipal Telegraphic.
9 Alarms, Thermostatic.
10 Asbestos Clothing.
11 Badges, Insignias, Buttons, etc.
12 Banner, Trumpets, etc.
13 Battery Jars.
14 Battery Zincs for Fire Alarm Batteries.
15 Bells, Firm Alarm, Municipal
16 Body Equipments.
17 Boxes, Gongs, Reels, Registers, Fire Alarm.
18 Brakes, Air.
19 Brake Linings.
20 Brooms, Fire.
21 Building Materials, Fire Retardant.
22 Caps, Firemen's.
23 Chains, Non-Skid Fire Apparatus.
24 Chassis for Fire Apparatus.
25 Chemical Engines and Tanks.
26 Chimney Fire Fusees & Compounds
27 City Service Trucks.
28 Coats & Suits, Firemen's Quick Hitch.
29 Combination Chemical & Hose Cars.
30 Cutting & Welding Equipment Blow Torch.
31 Cutting & Welding Equipment, Electric.
32 Deluge Sets.
33 Door Openers, Fire Station, Automatic.
34 Extinguishers, Calcium Chloride.
35 Extinguishers, Carbon Dioxide.
36 Extinguishers, Soda-Acid.
37 Extinguishers, Carbon Tetrachloride.
38 Extinguishers, Foam.
39 Extinguishers, Powder.
40 Fire Boat Nozzle Equipment.
41 Fire Department Supplies, General.
42 Fire Exit Devices, Door Opening.
43 Fire Alarm Posts.
44 Fire Escapes, Portable.
45 Fire Escapes, Rigid.
46 First Aid Equipment.
47 Flare Lights.
48 Flashlights, Hand.
49 Foam Generating Apparatus.
50 Foam Liquid Extinguishers.
51 Gas Masks and Respirators.
52 Gas & Smoke Helmets.
53 Goggles, Firmen's.
54 Helmets, Metal, etc.
55 Hose Carts, Reels & Racks.
56 Hose Clamps.
57 Horse, Fire.
58 Hose, Chemical.
59 Hose Holders.
60 Hose Jackets.
61 Hose Standardization Tools.
62 Hydrant Draining Pumps.
63 Hydrants, Fire.
64 Jacks for Fire Trucks.
65 Jacks, Shoring & Prying.
66 Ladders, Fire.
67 Lightning Arresters.
68 Motorcycles, Fire Dept. Equipped.
69 Nets, Life.
70 Nozzles, Pipes & Misc. Brass Goods.
71 Packings, Pumps.
72 Pads, Pole Hole.
73 Paints, Fire Resisting.
74 Priming Ether, Motor.
75 Pumping Cars, Standard.
76 Pumping Cars, Foam.
77 Pumps, Fire Apparatus.
78 Pumps, Fire Service, Stationary.
79 Pumps, Portable for Fire Protection.
80 Record Books, Fire.
81 Relief Valves.
82 Reviving Apparatus, Oxygen.
83 Rubber Clothing.
84 Salvage Covers.
85 Searchlights.
86 Shingles, Fire Retardant.
87 Shirts, Firemen's Special.
88 Sirens, Apparatus & Chiefs' Cars.
89 Sliding Poles.
90 Soda & Acid Chemicals.
91 Spark Plugs, Fire Apparatus & Motorcycles.
92 Squad and other Auxiliary Cars.
93 Sprinkler Head Shut-Offs.
94 Sprinkler Supervisory Service.
95 Sprinkler Systems, Automatic, Foam.
96 Sprinkler Systems, Automatic, Water.
97 Steam Fire Engines.
98 Syphons, Water.
99 Tarpaulins & Fire Blankets.
100 Tetrachloride Chemicals.
101 Thawing Equipment, Hydrant.
102 Tires, Fire Apparatus, Pneumatic, Solid, Cushion and Non-Skid.
103 Tractors.
104 Traffic Clearing Systems.
105 Triple Combination Pumping Cars.
106 Uniforms.
107 Water Towers.
108 Wheels, Cushion.
109 Whistles, Fire Alarm, Compressed Air.
110 Whistles, Fire Alarm, Steam.
111 Whistles, Fire Apparatus.
112 Wrecking Trucks.

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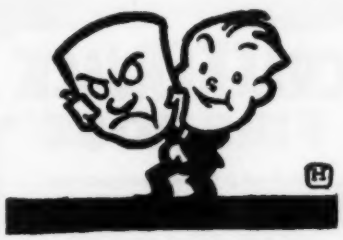

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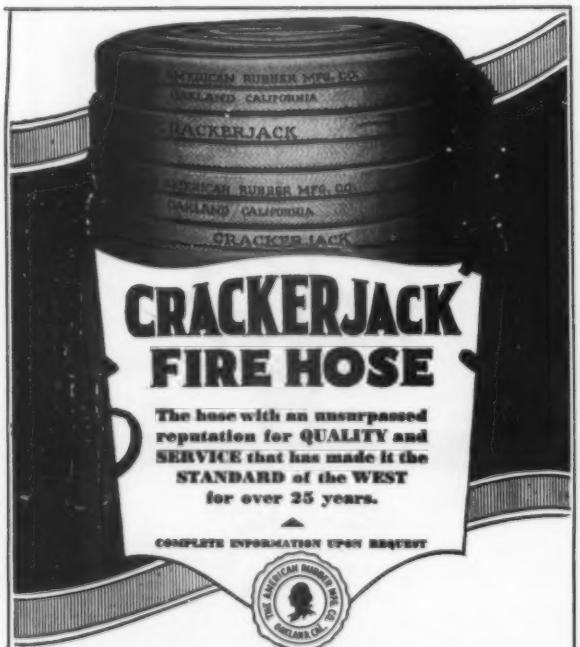

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